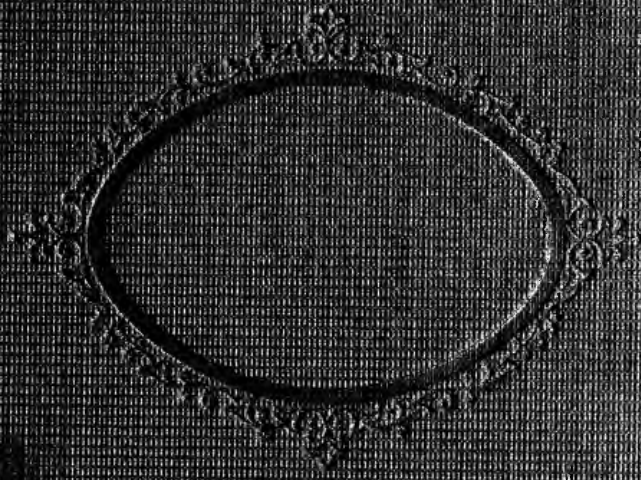

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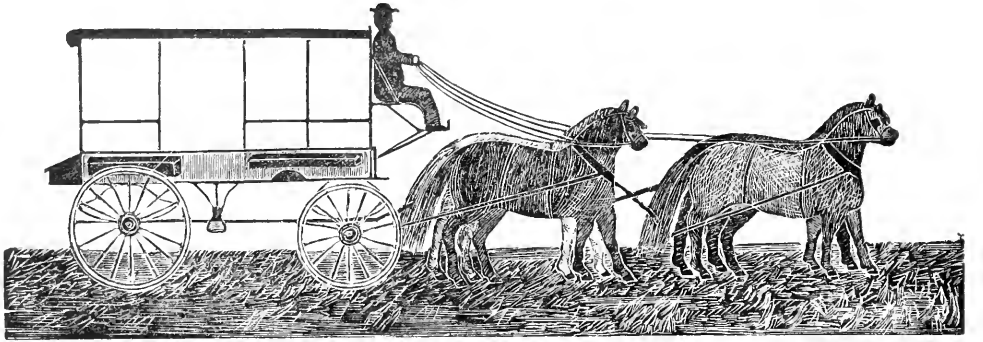

THE CARRY-ALL.

THE

TENTING SCHOOL:

—A—

DESCRIPTION OF THE TOURS TAKEN,

—AND OF THE—

FIELD WORK DONE,

—BY THE—

CLASS IN GEOGRAPHY

—IN THE—

ACADEMY OF SCIENCE AND ART

—AT—

RINGOS, N. J.,

DURING THE YEAR 1882.

BY C. W. LARISON, M. D.,

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RINGOS, N. J.:
C. W. LARISON, PUBLISHER.
1883.

TO THE STUDENTS OF GEOGRAPHY,

IN THE

ACADEMY OF SCIENCE AND ART,

AT

RINGOS, N. J.,

THIS BOOK IS RESPECTFULLY DEDICATED,

AS A TOKEN OF THE GUARDIAN CARE

EVER HAD FOR THEM WHILE UPON SCIENTIFIC TOURS,

BY THEIR TEACHER,

THE AUTHOR.

F13

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PREFACE.

As much interest has always been manifest by editors and the friends of education, in our Tours for scientific purposes, I have thought that it may be well to put in book-form, a description of the intensils needed to make a tour and the work done while in the field. Accordingly, I have written the following pages.

The pages of the article entitled Tour of Central N. J., were written while we were in the field, and the greater part of them while the Teachers and Students were sleeping. This happened not of choice, but of necessity. While tenting, the care of the party and the giving of instruction, occupies the most of my time while the students are awake; so, I get but little time to write, except while they are asleep.

Hence, while upon a Tenting Tour, my custom is to attend to the wants of the Students during the day; and, at evening to see that

thĕ tĕnts ănd tĕntĭng ărrāngemĕnts ăre ĭn prŏpĕr ōrdĕr, ănd thăt ēach hăs rētīred ĭn prŏpĕr ōrdĕr, ănd thĕn rētīre fōr ă năp. Ussūăllў, ăbout mĭdnīght, sŏmetīmes bēfōre, sŏmetīmes ăftĕr, I ăwāke, gō thrŏ thĕ tĕnts tŏ sēe thăt ăll thĭngs ăre prŏpĕr, ădjŭst mў līght ănd wrīte tĭll dąwn. At thĭs hour, thĕ măn-ŏf-ąllwŏrk ĭs ąlled tŏ fēed, tŏ tāke ēare ŏf thĕ tēams ănd tŏ prēpāre fōr thĕ dūtĭes ŏf thĕ dāy. Whĕn hē ĭs fųllў ăt hĭs dūtĭes, thĕ Tēachĕrs ănd Stūdĕnts ăre ąlled, ănd I rētīre fōr ănŏthĕr shōrt năp.

Hĕnçe yoū lĕarn thăt thĕ pāgĕs thăt ăre wrĭttĕn whīle tĕntĭng, ăre hāstīlў prēpāred, ănd ăre dŏne ăt ă tīme whĕn one ĭs ĭn nŏt ă gŏod ŏndĭtiŏn tŏ wrīte. Whĕn one hăs lēctūred twŏ ōr thrēe tīmes dūrĭng thĕ dāy, ănd hăs hăd thĕ ēare ŏf ă dŏzĕn ōr mōre stūdĕnts, frŏm dąwn tĭll bĕdtīme, hē fēels ă lĭttle ēarewōrn, ănd wrītes wĭth lĕss spĭrĭt thăn whĕn frēe frŏm ēares, ănd ŭnburdĕned wĭth lābor. Howĕvĕr, I hōpe thăt thĕ rēadĕrs ŏf thēse pāgĕs māy bē ĕntĕrtāined ănd ĕdĭfied. I hăve dēserĭbĕd thĭngs ăs I sąw thĕm, ănd whīle they wĕre frĕsh ĭn mў mīnd. Thĕ făcts ăre wŏrthў; ănd, wĕre mў stўle ŏf wrītĭng bĕttĕr sūitĕd tŏ dēserĭptiŏn, they ĉould härdlў fāil tŏ plēase.

Thĕ ŏrthŏgrāphў ŏf thĕ wŏrds ĭn thĭs bŏok, ĭn măny ēasĕs, dĭffĕrs sŏmewhąt frŏm thăt

found ĭn thĕ Wĕbstērĭan Dĭcţiōnārў. Tọ sōme ĕxtĕnt, I hăve fŏllōwed thĕ ădvīcẹ ŏf thĕ Spĕllĭng Rēfōrm Assōcĭāţiọn. Thĕ ĭnĕxplĭcăble jŭmblĭng ŏf chărăcters ĭn spĕllĭng Amĕrĭcan wŏrds ĭs ăn ŭnpärdōnable dĭsgrāce tọ thĕ Amĕrĭcan pēople. Indēed, ĭn thĕ spĕllĭng ŏf wŏrds ăccōrdĭng tọ thĕ ōld ūsāge, nēarlў one-fĭfth ŏf thĕ chărăctĕrs ärę ąphōnĭc. And thĕn ągāin, tọ rĕprēsĕnt thĕ sāme fōn, ĭn one cāse, ăt lēast, ăs mănў ăs fĭve dĭffĕrĕnt chărăctĕrs ärę ūsed. (Sēe mў Elēmĕnts ŏf Orthoepў, pāge 48). Fōr ĭnstância, thĕ sound rĕprēsĕntĕd ĭn thĕ wŏrd "shut" bў sh, ĭs sŏmetīmes rĕprēsĕntĕd bў sh; sŏmetīmes bў ç, ăs ĭn thĕ wŏrd "soçial;" sŏmetīmes bў ch, ăs ĭn thĕ wŏrd "chaise;" sŏmetīmes bў ş, ăs ĭn thĕ wŏrd "missĭon;" ănd sŏmetīmes bў ţ, ăs ĭn thĕ wŏrd "menţion." And thĕn tọ, ĭn thĕ ōrdĭnārў prĭnt, thēse lĕttĕrs ärę ūsed wĭthout dĭăcrĭtĭcăl märks tŏ shōw what sound thĕ lĕttĕr ĭs ĭntĕndĕd tọ rĕprēsĕnt. Sŭch à ūse ŏf lĕttĕrs ĭs ăbŏmĭnable. And, I hōld thăt ĕvĕrў hŏnĕst, phĭlănthrŏpĭc tēachĕr, ăs wĕll fōr hĭs ōwn crĕdĭt, ăs fōr thĕ wĕll-bēĭng ŏf thĕ cŏmĭng gĕnĕrāţiọns, wĭll dọ ąll thăt hē căn tọ ĭmprọve thĕ spĕllĭng ŏf thĕ Englĭsh lăngŭāge, ăs ĭt ĭs ūsed ĭn Amĕrĭcà. Tọ cŏntrĭbūte what I căn, ĭn pŭblĭshĭng thĭs book, I hăve ūsed tўpe wĭth dĭăcrĭtĭcăl märks, thăt ĭt māy bē sēen, ăt

à glance what fŏn à ch̆ăr̆ăct̆ĕr rĕprĕsĕnts, ōr whĕth̆ĕr ĭt rĕprĕsĕnts nō fŏn.

Thĕ words "through," "though," "programme," ănd sŏme ŏth̆ĕrs, I hăve bŏbbed. Thĕ ĕqŭăl ăppĕndāge "ugh" ănd "me" ăre ăs ūsel̆ĕss tŏ th̆ĕ bŏdy ŏf th̆ēse words whĕn th̆ĕ vowĕls ăre dīăcrĭt̆ĭcăll̆y märkĕd, ăs ĭs th̆ĕ tāil tŏ à tăd-pōle whĕn hĭs lĕgs hăve grōwn out. Lĕt th̆ēse tāils fall ăwāy—th̆ĕ words look bĕttĕr ănd dŏ bĕttĕr wĭth̆out th̆ĕm.

By prĭntĭng th̆ĕ book wĭth tўpes wĭth th̆ĕ dīăcrĭt̆ĭcăl märks ăffĭxĕd, à two-fōld wŏrk ĭs dŏne; (bōth ŏf whĭch ăre mŭch nēdĕd tŏ bē dŏne). 1st. Th̆ĕ rēadĕr sees ăt à glance how th̆ĕ word should bē prōnounçĕd. In th̆ĕ cāse ŏf yoŭng rēadĕrs (ănd they ăre th̆ĕ ones tŏ dērīve mōst bĕnēfĭt frŏm rēadĭng th̆ĭs book) ēach ănd ĕvĕrў new word, ăccŏrdĭng tŏ th̆ĕ ōld wāy ŏf prĭntĭng, nēçĕssĭtāt̆ĕs th̆ĕ ūse ŏf à Dĭct̆ĭŏnārў tŏ sēe how th̆ĭs new word ĭs tŏ bē prōnounçĕd. Whĕn th̆ĕ dīăcrĭt̆ĭcăl märks ăccŏmpănў th̆ĕ lĕttĕrs fŏrmĭng th̆ĕ word, th̆ĕ prŏpĕr prōnŭnçĭāt̆ĭŏn ŏf th̆ĕ word ĭs th̆ĕ fĭrst th̆ĭng lĕarned, ănd th̆ĕ ūse ŏf th̆ĕ Dĭct̆ĭŏnārў ĭs ŏbvĭātĕd, ănd tĭme ĭs sāved.

2d. Th̆ĕre ĭs plāçĕd bĕfōre th̆ĕ eyes ŏf ĕvĕrў one who rēads ĭt, à mēans ŏf sēeĭng how grēāt à nŭmbĕr ŏf ch̆ăr̆ăct̆ĕrs ĭn mănў ŏf our words ăre ăphōnĭc; ănd how ŏftĕn th̆ĕ sāme ch̆ăr̆ăctĕr ĭs ūsed tŏ rĕprēsĕnt dĭffĕrĕnt fōns, ănd

how ŏftĕn thĕ sāme fōn ĭs rĕprēsĕntĕd bȳ a nŭmbĕr ŏf lĕttĕrs. Thēse dēfĕcts—ōr abŏmĭnable ūsāgĕs—cān bĕst bē brŏught bēfōre thĕ eȳes ŏf thĕ rēadĭng pŭblĭc thĭs wāy, ănd thŭs, ĭn a meāsūre prēpāre thĕ wāy fōr thĕ new spĕllĭng whĭch ĭs ĕvĕrȳwhĕre mēetĭng wĭth fāvŏr, ănd ĭs sprĕadĭng thrọ thĕ rēcĕnt lĭtĕrātūre ŏf our lănguāge.

In thĭs book, thĕ dĭacrĭtĭcal märks ūsed ĭn prĭntĭng Wĕbstĕr's Unabrĭdged Dĭctĭonārў, ămĕndĕd ăs was found nēedfụl ĭn prĭntĭng mў Elēmĕnts ŏf Orthōēpў, ăre ūsed. Evĕrў vowĕl lĕttĕr thăt rĕprēsĕnts a fōn ĭs märkeđ ăs ĭt ĭs ĭn Wĕbstĕr's Dĭctĭonārў, ōr ĕlse ăccōrdĭng tọ thĕ prĭncĭplĕs dĭscŭssed ĭn mў Elēmĕnts ŏf Orthōēpў. And, ĕvĕrў cŏnsōnant lĕttĕr thăt ĭs ūsed tọ rĕprēsĕnt mōre thăn one fōn ĭs sō märkeđ ăs tọ ĭndīcāte whĭch fōn ĭs ĭntĕndĕd tọ bē ūsed ĭn thĕ plāce ĭn whĭch ĭt stănds. Fōr ĕxămple, g ĭn got, wē märk thŭs, ḡ; ănd g ĭn gem, thŭs, ġ. And sō ŏf ŏthĕr cŏnsōnants.

In ănў case ĭn whĭch a vowĕl lĕttĕr ĭs nŏt märkeđ, ĭt ĭs aphōnĭc; ăs a ĭn thĕ wŏrd mād, i ĭn thĕ wŏrd fīēld. And ĭn ănў wŏrd ĭn whĭch g ōr c ĭs nŏt märkeđ, ĭt ĭs aphōnĭc; ăs g ĭn thĕ wŏrd fŏrĕign, c ĭn thĕ wŏrd dŭck.

Fōr a fụllĕr dĭscŭssiọn ŏf thĕ sciencе ŏf fōnĭcs ănd thĕ prŏpĕr ūse ŏf sounds ănd chăr-

ăɛtĕrs̱ ĭn wȯrds̱, sēe mȳ bo̤ok ĕntītled Elēmĕnts ŏf Orthōēpў.

Upŏn rēadĭṉg thĕ pāġĕs̱ ăs̱ the̱y hăve bēen rētŭrned to̤ mē frŏm thĕ prĕss, a̤lthō I wa̤tehed thĕ pro̤of ăs̱ ɛlōselў ăs̱ I ɛo̤uld, I sēe mănў tȳpōḡrăphĭɛȧl ĕrrōrs̱. Bŭt ăs̱ sŭɛh ȧbound ĭn a̤lmōst ĕvĕrў bo̤ok, I ŏffĕr nō ăpŏlōġў.

Exc̣ĕptĭṉg thĕ ɛŭts ŏn pāġĕs̱ 38, 39, 41, 42, 48, 49, 50, 51 ănd 52, thĕ ĕnḡrāvĭṉgs̱ hăve bēen māde bȳ Mārў W. Pra̤ll, ăn ămāteūr who̤ hăs̱ nŏt lŏṉg wȯrked ăt thĕ ärt. The̱y sĕrve to̤ ĭllŭstrāte ɛlēarlў wha̤t wo̤uld bē dĭffĭɛŭlt to̤ dēsɛrībe.

To̤ ḡĭve sȯme īdēȧ ŏf thĕ ɛŏst ŏf ȧ to̤ŭr, I hăve ăppĕndĕd Appĕndĭx A. And, to̤ ḡĭve sȯme īdēȧ ŏf thĕ rēq̣uīremĕnts ŏf thĕ pūpĭls̱ rēspĕɛtĭṉg ȧ dĭsɛŭsṣiȯn ŏf thĭṉgs̱ sēen whīle ŭpŏn ȧ trĭp, I ăppĕnd two̤ ŏf thĕ fōur ĕssāys̱ thăt wĕre prēpāred bȳ thĕ stūdĕnts ănd ăs̱ ȧ pärt ŏf thĕ ɛlōs̱ĭṉg ĕxĕrc̣īs̱ĕs̱ ŏf thĕ tĕrm dūrĭṉg whĭɛh thĕ To̤ŭr wa̤s̱ māde.

Hōpĭṉg thăt thĕ Tĕntĭṉg Sɛho̤ol māy pro̤ve wȯrth rēadĭṉg, ănd thăt ĭt māy mēet wĭth ăs̱ mŭɛh fāvȯr ăs̱ hăs̱ mȳ Elēmĕnts ŏf Orthōēpў, I sŭbmĭt ĭt to̤ thĕ ɛrṳĕl mĕrc̣ĭes̱ ŏf our rēlĕntlĕss ɛrĭtĭɛs.

C. W. LARISON.

INTRODUCTION.

EQUIPMENTS FOR TENTING.

For a school of small size, the equipment for tenting need not be cumbersome nor expensive. The necessaries are a carry-all, a team, and team-utensils, tents, blankets, culinary apparatus and implements to facilitate study and the preservation of specimens. As our own outfit answers quite well for a party of eighteen persons, and as a description of the various parts of which it is composed will indicate the kind, proportion and quality of the things that we have found practical, I will proceed to describe those things which we, for several years, have used when tenting. As it is not necessary that the equipment of any other school should be exactly as ours is, while describing the parts of our own out-fit, I will take the liberty to suggest, as opportunity

prēsĕnts, what I think would ănswĕr quīte ăs wĕll ăs, ōr bĕttĕr thăn, thōse thĭngs that wē ăre ūsĭng.

Carry-all.—Thĕ cărrў-ąll ūsed bў thĭs schọol ĭs ą plāin, sŭbstănțiąl vehĭele sūitĕd tọ cărrў eighteen ădŭlt pĕrsons, tōgĕthĕr wĭth thĕ ĕntīre ēquĭpmĕnt nĕcĕssārў fōr ĕncămpmĕnt. In lĕngth, thĕ bŏdў ŏf thĕvehĭele ĭs 12 fēet; ĭn wĭdth 3 fēet 10 ĭnches; ĭn heĭght 5 fēet. In thĕ tŏp ŏf thĕ bŏdў, ŏn eithĕr sīde, ĭs ą shĕlf ąbout 18 ĭnches wīde ănd 5 ĭnches dēep, dīvīdĕd ĭntọ nŭmĕroŭs cŏmpärtmĕnts ănd sēcūrelў clōsed bў ą wĕll fĭttĭng dōor. Usūąllў ĭn thēse cŏmpärtmĕnts ăre lŏdged sŭch thĭngs ăs mąy bē nēedĕd whīle thĕ vehĭele ĭs ĭn mọtiọn, ōr sŭch thĭngs ăs dọ nŏt beār tọ bē prēssed wĭth weightў ŏbjĕcts. Thēse ăre ąlsō sūitąble plāces fōr cărrўĭng books, măps, chärts, pōrtfōlĭōs, drąwĭng ĭmplēmĕnts, bōtănical spĕcĭmĕns ănd thĕ līke. Indēed, thēse shĕlves ăre sō ūsefụl ănd sō hăndў, thăt I rēgărd thĕm ĭndĭspĕnsąble tọ ą tĕntĭng cărrў-ąll. Althō they ăre ąlwāys fụll, yĕt thĕ cŏntĕnts ŏf ēach cąn bē gŏttĕn wĭthout dĭstŭrbĭng thĕ ŏthĕr ăpärtmĕnts, ōr wĭthout pŭttĭng thĕ ĭnmątes ŏf thĕ vehĭele tọ dĭscŏmfōrt, ōr tọ troŭble.

Alŏng thĕ sīdes, thĕ roof ŏf thĕ cărrў-all prōjĕcts sĕvĕn ĭnchĕs. Undĕr thĭs prōjĕcțion are ūsūăllў sŭspĕndĕd trĭpŏds fōr thĕ cŏmpass, thĕ tĕlēscōpes, ănd sŭch ŏthĕr ūtĕnsĭls ăs are nĕcĕssārў fōr fĭēld wŏrk. Thŭs sŭspĕndĕd, they are hăndў tŏ gĕt ăt ănў tīme; whĕn thĕ tēam stŏps, ăt a sīte ăt whĭch sŏme ŏbsĕrvățions are tŏ bē mādе, thēse tŏols fōr stŭdў can bē gŏt wĭthout ŭnpăcking, ōr ōvĕrhaulĭng thĕ mōre cŭmbrous ĕlĕmĕnts ŏf bāgGăge.

Bēsĭdes thĕ cŏnvēnĭĕnce ŏf sŭspĕndĭng sŭch ĭmplēmĕnts ăs should bē ĕvĕr rĕadў fōr thĕ ūse ŏf thĕ stūdĕnts, ĭn tīme ŏf rāin, thĭs prōjĕcțion ĭs ŏf vĕrў grēat sĕrvĭce. Pēople ĭn a vēhĭcle wĭth sŭch a prōjĕcțion, ĭn tīme ŏf a sēvēre stōrm, sŭffĕr lĕss frŏm thĕ bēatĭng ĭn ŏf thĕ wătĕr. In tīme ŏf a shŏwĕr, wātĕr drĭvĕn ĭn ăt thĕ tŏp ŏf thĕ cărrĭāge ĭs mŭch mōre ăbŭndant ănd mŭch mōre dĕtrīmĕntal thăn thăt ĕntĕrĭng ăt ănў ŏthĕr plāce. Thĕ prōjĕcțion grēatlў brēaks thĕ fōrce ŏf thĕ drĭvĭng ĕlēmĕnt ănd mŭch prēvĕnts thĕ bēatĭng ĭn ŏf wăter. Nōr dŏes thĕ prōjĕcțion hŭrt thĕ ăppēarance ŏf thĕ vēhĭcle. Tŏ thĕ ŏthĕrwīse flăt sĭde ŏf a lŏng cărrĭāge, ĭt ŏffĕrs a plēasĭng rēlĭef;—thĕ mōre plēasĭng bēcause ĭts ūtĭlĭtў ĭs sō ăppărĕnt.

From each side of the body, over the front wheels, projects a box 12 inches wide, 8 inches deep and 5 feet long. In one of these boxes are carried a chest containing some nails and bolts of various sizes, screws, a screw-driver, pincers and a couple of chisels, such utensils as are necessary for the team,—halters, brushes, curry-combs, straps, &c., &c. In the other are the hammers for Geological work, trowels and large knives for Botanic work, and such tools as are useful in putting up the tent.

From the left side of the body, opposite to the hind wheel, projects a box 7 inches wide, 12 inches deep and 4 feet long. In this is carried a spade, a saw, an axe, a small, strong hoe, axle grease, utensils for greasing the axles, &c., &c.

Upon the back part of the body is fastened a box 4 feet and 8 inches long, 15 inches deep and 18 inches wide. In this box is carried the tents and tenting utensils, and most of the culinary implements. Projecting from the back part of the vehicle, it is out of the way of the passengers while the wagon is in motion, and convenient of access while in camp.

Beneath this box on either side, is a sliding

drąwĕr, 6 ĭnchĕs wīde, 5 ĭnchĕs dēep ănd 18 ĭnchĕs lŏng. In one ŏf thēse drąwĕrs ăre kĕpt thĕ knīves, fōrks ănd spo͝ons. In thĕ ŏthĕr ăre thĕ ūtĕnsĭls fōr wąshĭng—sŭch ăs towĕls, sōap, &c., &c.

Thēse drąwĕrs cǎn bē rēmo͝ved frŏm thĕ vĕhĭcle ăt wĭll. And ăs ą rule, thĕ one cŏntāining thĕ knīves, fōrks ănd spo͝ons ĭs rēmo͝ved ănd ūsed ăs ą knīfe, fŏrk ănd spo͝on trāy, ĭn thĕ ăct ŏf sĕttĭng ănd clēarĭng thĕ tāble,—ą vĕrў cŏnvēnĭĕnt thĭng, ĭndēed.

Frŏm thĕ frŏnt ŏf thĕ vĕhĭcle prōjĕcts ăn ĕlĕvātĕd sĕat fōr thĕ drīvĕr ănd hĭs ăssĭstănt. Thĭs sēat ĭs sō ărrānged ăs tǫ gĭve thĕ drīvĕr ăn ĕxcĕllĕnt ŏppōrtūnĭtў tǫ sŭrvey thĕ tēam, thĕ vĕhĭcle ănd thĕ rōad, fŭll scōpe fōr mănœuvĕrĭng ănd cŏmplēte cŏntrōl ŏf thĕ vĕhĭcle ănd ŏf thĕ tēam.

Upŏn thĕ sĭdes ŏf thĕ wăgŏn, thĕ tĕnt pōles ăre făstĕned bў mēăns ŏf străps.

Thĕ bŏxĕs fōr cărrўĭng thĕ vărĭoŭs ūtĕnsĭls bēĭng ărrănged ŭpŏn thĕ outsīde ŏf thĕ vĕhĭcle, thĕ ĭnsīde cǎn bē ĕntīrelў ŏccūpĭed bў thĕ pāssĕngĕrs, their vĭctuăls, clōthes, blănkĕts ănd thĕ lĭke.

In thĕ băck părt ŏf thĕ wăgŏn ĭs ą bŏx 15

in. wīde, 18 in. dēep, ănd lŏng ēnoŭgh tọ ĕxtĕnd frŏm sīde tọ sīde ŏf thĕ wăgŏn. In thĭs bŏx ĭs kĕpt thĕ vĭctuals. Whĕn nēedĕd, ĭt ĭs ūsed ăs à sēat. Undĕr ănd ŭpŏn thĕ sēats ärе plāçed thĕ blănkĕts. And sō fụll dọ thĕ blănkĕts fĭll thĕ spāçes bēnēath thĕ sēats, thăt whĕn ạll ärе ĭn thẹir plāçes, thĕre ĭs bārelў rọọm fōr thĕ fēet.

Tọ drạw à vēhĭcle ŏf thĕ prōpōrtiọns ănd cāpăçĭtў ăbŏve stātĕd, rēquīres à tēam ŏf fōur gọọd hōrsĕs. Whĕn thĕ ĭmplēmĕnts ärе lōadĕd ănd thĕ pärtў ärе sēatĕd, thĕ ăvĕrāge weight cărrĭĕd ĭs ăbout thĭrtў hŭndrĕd lbs. Thĭs sēems tọ bē à hĕavў lōad; bŭt wĭth thĕ bĕst ēcŏnōmў wē căn prăctiçe, wē cănnŏt rĕdūce thĕ weight mŭch bēlōw thĭs ămount. In cāse fēed fōr thĕ tēam ĭs tọ bē cărrĭed, thĕ weight wĭll bē ăbŏve thăt stātĕd. Bŭt, ĕxçĕptĭng whĕn gōĭng ĭntọ à mountaĭnoŭs rēgiọn, ŏr sŏme dĕsōlāte plāçe, sŭch ăs thĕ pĭnes ŏf New Jĕrseў, fär ăwāy frŏm ănў plāçe ăt whĭch fēed ĭs sōld, ĭt ĭs ĭmprăctĭcal tọ cărrў fēed—ĕxçĕptĭng thăt ĭt māў bē nĕçĕssārў tọ cărrў ĭt à mīle ōr twọ frŏm thĕ plāce ŏf pŭrchāse tọ thĕ plāçe ŏf ĕncămpmĕnt. Thĕ prīçe ŏf fēed, ĭn dĭffĕrĕnt plācĕs, vārĭes sō lĭttle that thĕre ĭs nŏt ēnoŭgh

ḡāined bў pŭrehāsĭng whēre ĭt ean bē bŏught ehēap, to̤ māke ŭp fōr the lŏss sŭstāined bȳ the ĭneŏnvēnịĕnçe ŏf ĭnerēasĭng the lōad ănd the jādĭng ŏf the tēam.

Team Utensils.—Fōr fästĕnĭng the tēam whīle fēeding ănd whīle stănding ōvĕr nīght, ha̤ltĕrs̱ äre nēedĕd. Thēs̱e shọuld bē strŏng. Hōrsĕs̱ tīed ĭn ȧ strānġe plāçe ănd ŭnprōtĕetĕd bў stābles̱ ärē ŏftĕn ĭnelīned to̤ breāk lo̤ose; ănd, dūrĭng the fĭrst dāy ănd nīght, ȧ hōrse thăt breāks lo̤ose ĭs̱ quīte ăpt to̤ hāstĕn hōme. I hāve sēen mōre thăn one shärp răçe to̤ eăptūre ȧ hōrse thăt hăs̱ brōkĕn lo̤ose; and whĕn sŭeh ȧ rāçe ŏeeŭrs dūrĭng the nīght, ĭt ĭs̱ nŏt a̤lwāys̱ plĕas̱ȧnt, ēvĕn ĭf sŭeçĕssfụl.

Usūȧllў ȧftĕr the fīrst dāy ōr two̤, the hōrsĕs̱ shōw ȧ dĭspōsĭtiȯn to̤ ăssōcĭāte ēaeh wĭth the ȯthĕr, ănd wĭth the tĕntĭng pärtў; ănd ĭn eāse nŏt mōre thăn one hōrse breāks lo̤ose, hē sĕldȯmlў strāys̱ ŏff. Bŭt frŏm ȧ lo̤ose hōrse ăs̱ mŭeh dāngĕr thĕn ăeerŭes̱ ăs̱ whĕn hē ĭs̱ dĭspōs̱ed to̤ lēave. Hē ĭs̱ ȧlmōst çĕrtaĭn ēithĕr to̤ ănnoy ōr ĭnjūre the ȯthĕr hōrsĕs̱, ōr ĕlse vĭsĭt the tĕnts; and, ănўone mīght wĕll ĭmăġĭne thăt ȧ vĭsĭtōr ĭn the shāpe ŏf ȧ shărpshŏd hŏrse, howĕvĕr friĕndlў hē mĭght bē dĭs-

pōsed, would bē ăs dăngĕroŭs tọ thĕ slēepĭng stūdĕnts ăs hē would bē ŭnwĕlcọme tọ wākefụl ones. A grāy hōrse thăt hăs sĕrved ŭpŏn măny à tĕntĭng tọŭr, ūsed tọ bē sō kīndlў dĭspōsed thăt whĕn dọne cătĭng hĭs mĕss, hē was ŏftĕn lĕt lọose tọ brọuse ārọund fōr à whīle. Usūàllў àftĕr nĭppĭng thĕ grăss fōr à tīme, hē would dēlĭbĕrātelў ănd sōcịàblў gō ŭp tọ thĕ tĕnts, sŭrvēy thĕm ăs cārefụllў ăs à măn would, gō tọ thĕ tĕnt dōor, ĕxtĕnd hĭs hĕad ĭntọ thĕ tĕnt, ănd ĭf nŏt nōtĭcĕd, hē would neigh ġĕntlў, ōr nĭbble sọme one à lĭttle; ănd, ĭf thĕn nŏt tōld tọ gō àwāy, hē would cạuṭĭoŭslў wạlk ĭn, ăs ĭf hē wĭshed tọ māke hĭs hōme ĭn thĕ tĕnt wĭth thĕ fōlks.

Thĕ sāme hōrse frĭghtĕned whĕn brọusĭng ărọund, wọuld ạlwāys sēek rĕfūġe ăt the tĕnts; ănd sọmetīmes ĭt was dĭffĭcŭlt tọ kēep hĭm àwāy, ănd tọ kēep hĭm frŏm stĕppĭng ŭpŏn thĕ ĕdġĕs ŏf thĕ tĕnts. Mōst ọthĕr hōrsĕs thăt hăve bēen ūsed ŭpŏn tĕntĭng tọŭrs hăve shōwn lĭke dĭspōsĭtions, bŭt nŏt ĭn sō märkeđ à dēgrēe.

Fēed bŏxĕs ōr māngĕrs ăre ĭndĭspĕnsàble tọ thĕ tĕntĭng outfĭt. Tọ sĕrve ăs māngĕrs, twọ ŏf thĕ sēăts ĭn thĕ vēhĭcle ăre sō ărrānged thăt, whĕn tŭrned ŭpsĭde dọwn, cạch one mākes à

trough suitable for feeding two horses. As these seats are never needed while the team is feeding, they serve both purposes equally well.

As horses eat well only when the manger is somewhat elevated above the ground, it is often difficult to make such arrangements for feeding as we wish. If in a woods, or near a fence, this difficulty is overcome by using for each horse a small box as a manger. Through the side of the manger a hole is bored and extending through this hole is a large strong screw armed with a head that allows one to turn it easily, with the fingers. With a bit or a small auger, of suitable size, a hole is bored into a tree or into the fence, and then by means of the screw the box is secured at any desirable height with very little labor.

As much extemporizing is always required in providing for the horses, especially when

fär ȧwāy frŏm thĕ cȯmfōrts ŏf stāblēs ănd shĕdṣ, ĭt ĭṣ bĕst tọ hāve ȧlŏng ăn ăxe, ȧ ṣạw, ȧ chĭṣĕl ōr twọ, sĕvĕrȧl bĭts ănd ȧ brāçe, sĕvĕrȧl stāplēs ănd rĭngṣ, ȧ ṣcrew drīvĕr, sȯme ṣcrews ănd sȯme nāilṣ, sĕvĕrȧl hāim străps, ăn ạwl ănd sȯme wăxeđ ĕndṣ, ănd ȧ gọod sŭpplў ŏf rōpe; ŏf thĭs thĕre shọuld bē piĕçēṣ ŏf dĭffĕrĕnt sīzēṣ. Tọ bē ĭn ȧ mȯuntaĭnoŭs dĭstrĭct, ōr ĭn ȧ bărrĕn rĕgiȯn, fär ȧway frŏm mēchănĭc shŏps ănd härdwāre stōreṣ, wĭth fōur hŭngrў hōrsĕṣ ănd wĭthȯut thĕ fāçĭlĭtĭeṣ tọ tāke prŏpĕr cāre ŏf thĕm ĭṣ mĭṣērў ĭn thĕ ĕxtrēme. It ĭṣ sūre tọ wȯrk rūĭn tọ thĕ tēam, ănd dĭsăstĕr tọ thĕ pärtў. Tọ ĕnṣūre sŭcçĕss, ạll mŭst bē prōvĭdĕd fōr—thĕ vēhĭcle ănd thĕ tēam nōt lĕss thăn thĕ pärtў.

Whīle tĕntĭng ĭn ȧ mȯuntaĭnoŭs dĭstrĭct, ōr ĭn ănў dĭstrĭct fär ȧwāy frōm ȧ hāy mărkĕt, ḡreāt dĭffĭcŭltў ĭs ūṣūȧllў sŭffĕred ĭn prōvĭdĭng thĕ tēam wĭth hāy. Grāin cȧn bē bȯught ȧlmōst ănўwhĕre, ănd ĭt ĭṣ ēaṣў to cărrў; but ūṣūȧllў ĭt ĭṣ nŏt ēaṣў tọ fĭnd hāy, ĕspĕçiȧllў ăt sŭch plāçēṣ ăṣ thĕ hōrsĕṣ mōst nēed ĭt; ănd ĭt ĭs ȧlwāyṣ ȧ cŭmbĕrsȯme ănd ȧ trọublesōme fŏddĕr tọ cărrў; bŭt hōrsĕṣ fāre bădlў wĭthȯut ĭt; ĭt ĭṣ crụĕltў ănd dāngĕroŭs tọ dēprīve thĕm

ŏf ĭt fōr ănў ꞓŏnsĭdĕrȧble lĕn̲gth ŏf tīme ; ănd sō, ăs̲ rēspĕꞓts thĕ tēam, thĕ hāy quĕsṭiōn ĭs̲ thĕ mōst sērĭoŭs prŏblĕm thăt rēlātes ṭọ tĕntĭn̲g.

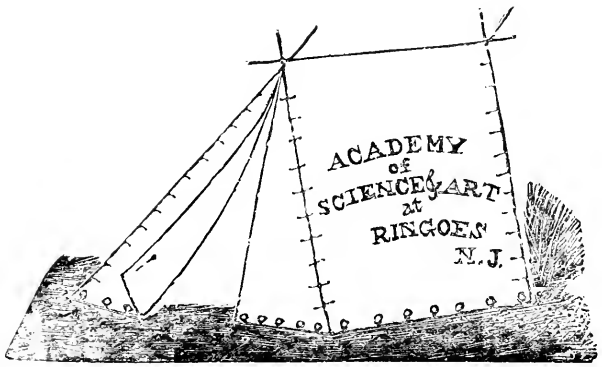
Thĕ ḡreāt lĕn̲gth ŏf thĕ bŏdў ŏf thĕ vēhĭꞓle ănd thĕ spāçe rēquīred fōr thĕ dŏuble tēam, wōuld māke ĭt ĭmprăꞓtīꞓȧl tọ̤ tŭrn ĭn ȧ nărrōw plāçe, ōr ŭpŏn ȧ smạ̤ll ārēȧ. Bŭt, thĭs dĭffīꞓŭltў ĭs̲ ŏbvĭātĕd bȳ ăn ärꞓh ꞓut ĭntọ̤ thĕ sīde ŏf thĕ bŏdў ăt sŭꞓh ȧ plāçe ănd ĭn sŭꞓh ȧ wāy thăt thĕ fōre whēel, whĕn thĕ tŏn̲gue ĭs̲ tŭrned, ꞓȧn pȧss bēnēath thĕ bŏdў ŭntĭl ĭt strīkes thĕ lăn̲g. Bȳ mēans̲ ŏf thĭs sĭmple ărrānġemĕnt thĕ fāçĭlĭtў tọ̤ tŭrn ĭs̲ sō ḡreāt thăt I hăve sēen thĕ drīvĕr tŭrn thĕ ꞓărrў-ạ̤ll ăround whĕn fụ̤llў lōadĕd, ĭn ȧ twọ̤ rŏd rōad. Thĭs ēas̲e ŏf tŭrnĭn̲g, tọ̤ ȧ tĕntĭn̲g vēhĭꞓle, ĭs̲ ŏf vĕrў ḡreāt ĭmpōrtȧnçe. Ofttīmes̲ thĕ mōst dēsīrȧble plāçes̲ fōr pĭtꞓhĭn̲g thĕ tĕnts äre nŏt ēas̲ў ŏf ăꞓçĕss. Ofttīmes̲, ĭn mountaĭnoŭs plāçĕs̲, vĕrў shōrt tŭrns̲ mŭst bē māde ĭn ōrdĕr tọ̤ pȧss bētwēen ănd ăround rŏcks, tọ̤ wīnd ăround ănd bētwēen trēes, ănd tọ̤ māke ȧ quĭck ănd shōrt tŭrn ŭpŏn ȧ smạ̤ll ōpĕn ārēȧ, thăt ĭs̲ sŭrroundĕd bȳ ĭmpȧssȧble bărrĭĕrs̲.

Tọ̤ thĕ ĭnĕxpērĭĕnçeđ, ĭt māy bē ȧ quĕsṭịȯn

whether in case the party number eighteen or twenty, it would not be better to divide it and drive two carry-alls. As respects this question,—experience has taught us to do as we are now doing. While the vehicle is in motion, much instruction can be given relative to the objects and the plans we are passing. Indeed, a vast deal of instruction relative to the Geography, Geology, Botany and Agriculture of the district through which we are going is always given while we are riding along.

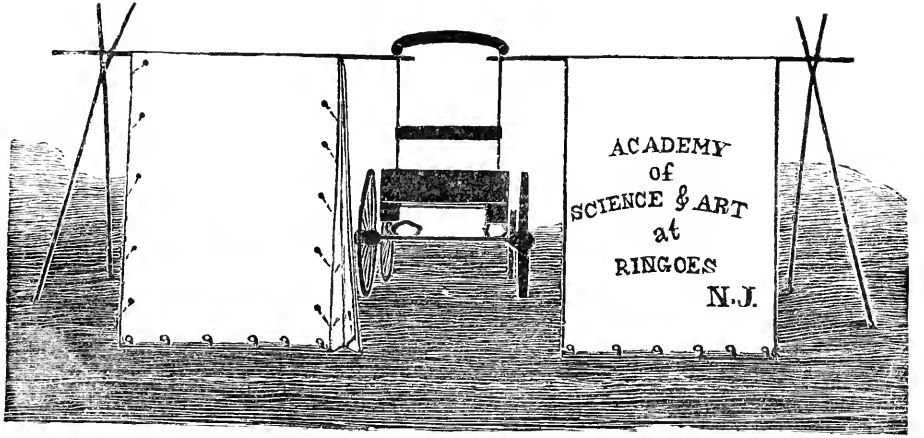
In order that this instruction may be shared by each pupil, it is not only necessary that each one be so seated that he can hear what remarks the teacher is making, but he must, at the same time, be so seated that he, with ease, views the object under discussion. To provide for easy of viewing, the vehicle is unusually high, and so arranged that, from end to end nothing obstructs the vision. Indeed, as the vehicle passes along, the passengers seem to look down upon all objects that are upon the ground within the distance of many rods; and as it passes through the streets of villages, or cities, each passenger is above the head of the footman upon the pavement, and commands

ăn ĕxtĕndĕd vieẇ ŏf thĕ strēet, thĕ pāvemĕnts, thĕ prŏmēnādes, thĕ drīves, thĕ pärks, thĕ rēliēfs ŏf bŭĭldĭngs ănd whătĕvĕr ĕlse ĭs ŏf ĭntĕrĕst, ŏf ūtĭlĭtў ŏr ŏf beaūtў. In ōrdĕr tọ vieẇ ȧ çĭtў, ōr ȧ vĭllāġe, wē knōẇ of nō ŏthĕr ărrāngemĕnt thăt ĭs sō wĕll sūitĕd, nōr ĕăn lĕss bĕ sāid ĭn rēspĕct tọ ĭts ădăptātiọn tọ vĭeẇĭng ȧ rụrȧl dĭstrĭct.



"A" Tent.

Tents.—Fōr ȧ pärtў ŏf eightēen, twọ tĕnts ăre rēqụīred. Fōr ọụr pŭrpōse, thĕ "A" tĕnt ănswĕrs vĕrў wĕll. It ĭs sĭmple, ēasў tọ pụt ŭp, ĕŏmmōdĭoŭs, ĕffĕctūăl, ănd ēasў tọ tāke dọẇn ănd păck āwāy. Fōr thĭs tĕnt, whĕn sĕpārāte frŏm thĕ vēhĭcle, fĭve pōles ăre nēedĕd. —twọ, ȧbọụt eight fēet lŏng, fōr ēaeh ĕnd, ănd ọne, ȧbọụt fōurtēen fēet lŏng, fōr thĕ çĕntĕr.

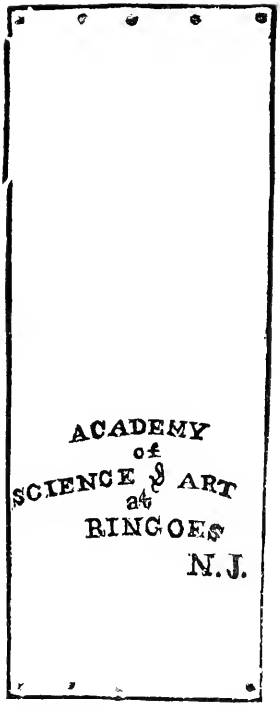


Carryall with Tents Pitched by the Sides.

But our method of pitching the tent is such as to obviate the necessity for two of the end poles. In the cornice, along the side of the carry-all, is a hole through which extends a rope. By means of this rope, one end of the centre-pole is suspended from the wagon top. The other end of the centre-pole is suspended by shears made by fastening together with a hame strap at a suitable place, two of the eight feet poles. By this arrangement, we are oblig'd to carry less poles. Thus arranged, the tent is very close to the wagon; but this we often find a great convenience. In case it storms, the distance from the wagon to the tent cannot be too little.

For the arrangement of the poles, in pitching the tent, see the engraving above.

When moving from place to place, the poles are strapped up on the right side of the wagon, about level with the back of the seats.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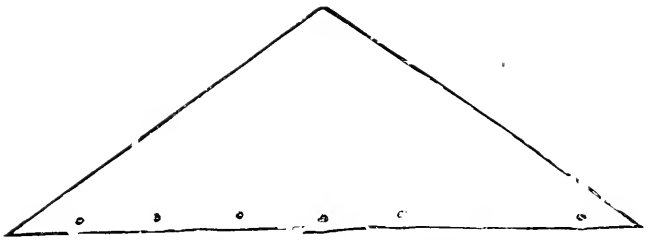
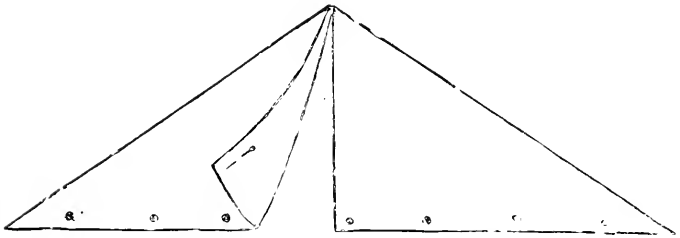
THE ROOF SHEET OF CANVAS.

Thĕ rọof piēce ŏf cănvăs fōr ă tĕnt ĭs rĕctăngūlăr. It ĭs ăbout twĕntў-fōur fēet lŏng, ănd twĕlve fēet wīde. Thĭs mākes ă tĕnt thăt ĭs ămple ănd cŏnvēnĭĕnt.



Canvas of the Closed End.

As the back part of the tent is always kept closed, the canvas for this end is made in one piece. In form, it is triangular. Of this piece the ground edge is about twenty feet long. At its greatest width, it is about seven feet.



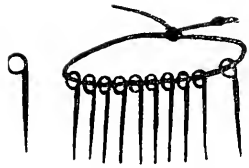
Canvas Sheets of the Open End.

The canvas for the end of the tent at which it is entered, is made in two pieces. Each piece is a right angled triangle, of which the base is ten feet and the perpendicular seven feet. When in position, these pieces are joined along the perpendicular edges. When thus

ärrănged, they ĕŏmplētelў ₵lose ŭp thĕ ĕntĕrĭng ĕnd ŏf thĕ tĕnt. Bў lēavĭng one ŏf thĕm lo͝ose ăt thĕ ground, ĭt māy bē dra͝wn ȧsīde, ŏr pĭnned bȧck, to͝ ănswĕr ăs ȧ dōor, ĭn ĕntĕrĭng ōr lēavĭng thĕ tĕnt.

To͝ fȧstĕn thĕ sĕvĕrȧl piēçĕs ŏf ₵ănvȧs to͝gĕthĕr, lārge pĭns ȧre ūsed. To͝ sē₵ūre ȧ sūitȧble pĭn fōr thĭs pŭrpōsē ĭs ăn ĭmpōrtȧnt ītĕm. Thĕ pĭnnĭng ŏf thĕ ₵ănvȧs ĭs nŏt ȧ smȧll ₵hōre, ĕspĕçiȧllў sō, ĭn ₵ȧse thĕ pĭns ȧre ēithĕr to͝o smȧll ōr to͝o lȧrge. If thĕ pĭn ĭs to͝o smȧll, thĕ weight ŏf thĕ ₵ānvȧs, ŏr ĭts mo͝vemĕnt bў thĕ wĭnd, so͝on bĕnds ĭt, ȧnd thĕn ĭt ĭs nō lŏngĕr ĕffĭçiĕnt. If ĭt ĭs to͝o lȧrge, ĭt ĭs wĭth dĭffĭ₵ŭltў piērçeđ thro͝ thĕ ₵ănvȧs, ȧnd ĭs vĕrў ŏftĕn bĕnt ĭn thĕ ĕffōrt. Thĕ pĭns nŭmbĕrĕd 3 ȧre ȧ ₵ŏnvēnĭĕnt sīze.

Thĕ ground-ēdge ŏf the ₵ănvȧs ĭs ȧrmed wĭth ȧ smȧll rōpe, sō hĕmmĕd ĭn ăs to͝ fōrm ȧ strŏng bōrdĕr. Alŏng thĭs bōrdĕr, ăt ĭntĕrvȧls ŏf ăbo₵ut two͝ fēet, ȧre hōles lȧrge ēnoŭgh to͝ ȧdmĭt pĭns five-eighths ŏf ăn ĭnch ĭn dīămētĕr. To͝ prēvĕnt teārĭng o₵ut, ōr teārĭng ĭnto͝ thĕ ₵ănvȧs, they ȧre wĕll hĕmmed. Thro͝ugh these hōles ĕxtĕnd thĕ ground-pĭns thăt hōld thĕ tĕnt to͝ thĕ ground.



Ground Pins Strung on a Rope.

Thĕ ground-pĭns äre mäde ŏf īrŏn, ⅜ ŏf ăn ĭnch thĭck, one foot lŏng, shärpĕned ăt thĕ ĕnd thăt ĭs drĭvĕn ĭntŏ thĕ ground, ănd ăt thĕ ĕnd thăt hōlds thĕ cănvăs bōrdĕr, cūrled ōvĕr sō ăs tŏ fōrm à rĭng. Thĭs rĭng sĕrves thĕ dŏŭble pŭrpōse ŏf ăctĭng ăs à hŏok ĭn hōldĭng thĕ cănvăs bōrdĕr, ănd ăs à hăndle, ĭn cărrўĭng thĕ pĭns, ănd ĭn drąwĭng thĕm out ŏf thĕ ground. Pĭns ŏf lĕss sīze äre ĭnĕfficiĕnt; sŏmetīmes lŏngĕr ones äre bĕttĕr,—ēspĕçiällў whĕn thĕ tĕnt ĭs pĭtched ŭpŏn săndў ground,–sŭch ăs that ĭn thĕ pīnes ŏf N. J., ōr thăt ălŏng thĕ sēa shōre, ănd thĕ līke.

Tŏ sēcūre thĕ ground-pĭns ägăinst lŏss, it is wĕll tŏ sēcūrelў tīe à smąll rōpe tŏ thĕ rĭng ŏf one ŏf thĕ pĭns ĭn sŭch à wāy thăt thĕ ĕnd ŏf thĕ rōpe ĕxtĕndĭng frŏm one sīde ŏf thĕ pĭn ĭs sĕvĕräl tīmes lŏngĕr thăn thăt ĕxtĕndĭng frŏm thĕ ŏthĕr sīde. Thĕn, ŭpŏn thĕ lŏngĕr ĕnd ŏf thĕ rōpe, strĭng ąll thĕ pĭns bēlŏngĭng tō thĕ

tĕnt; ănd thĕn sō tĭe thĕ ĕndş ŏf thĕ rōpe thăt ĭt iş nōt pŏssĭble fo̲r ănў pĭn tọ gĕt ŏff ŭntĭl thĕ rōpe ĭş ŭntĭed. Cārefụllў fŏllōwĭn̲g thĭs plăn, hăş sāved mănу a stūdĕnt mŭch troŭble. Thĕ lŏss ŏf a sĭn̲gle ḡro̲und-pĭn ĭş sērĭoŭs—ĕspĕçiallў ĭf ŭpŏn a stōrmў dāy, thĕ lŏss iş nŏt dĭsc̣ovĕred ĭn tīme tọ prōvīde ănothĕr bēfōre pĭtchĭn̲g thĕ tĕnt. Uşūallў, sòme one bēlōn̲gĭn̲g tọ thĕ pärtў ūsĭn̲g thĕ tĕnt ĭş ĕnjoined tọ hăve chärge ŏf thĕ ḡro̲und pĭnş; ănd, hē ĭş ădvīşed tọ plāçe ēach pĭn ŭpŏn thĕ rōpe ăş sọon ăş hē rēmọveş ĭt frŏm thĕ ḡro̲und.

Hanging Bar.—Tọ hăn̲g smạll thĭn̲gş ŭpŏn, a bär fōur fēet lōn̲g, ärmed wĭth họoks, ănd sŭspĕndĕd frŏm thĕ ĕnd pōleş, ĭş a ḡreāt cŏnvēnịĕnçe. Upŏn thēşe họoks māy bē hŭn̲g bŏnnĕts, hăts, shạwlş ănd thĕ lĭke. A sĭmĭlär bär mĭght bē sŭspĕndĕd frŏm thĕ cĕntĕrpōle.

Blankets.—Each mĕmbĕr ŏf a tĕntĭn̲g pärtў should bē prōvīdĕd wĭth ăt lēast twọ blăn̲kĕts. One ŏf thēşe hē nēedş tọ sprĕad ŭpŏn thĕ ḡro̲und tọ lĭe ŭpŏn, tọ prŏtĕct hĭm ăḡāinst dămpnĕss ănd dĭrt, thĕ ŏthĕr, hē nēeds to sprĕad ōvĕr hĭm tọ kēep hĭm wạrm. Uşūallў, twọ, ōr mōre, lĭe ŭpŏn thĕ sāme blăn̲kĕt. In

this case, two or more blankets are placed beneath the sleepers, and two, or more, as they seem to require, are spread over them.

The kinds of blankets used are various. Clean horse blankets, or lap robes, answer very well. Buffalo robes are good. Pieces of carpet answer a good purpose. Quilts are good. Indeed, whatever blanket is good for other purposes is good for tenting.

Upon sandy ground especially, it is well to have the first piece spread down as large and as stout as possible. If the first layer is in small pieces, the edges often get turned up, or the pieces shoved apart, and the sand works up between the blankets, and becomes annoying. Accordingly, we are provided with a strong piece of thick heavy carpet that covers all that part of the tent upon which we expect to lie. Upon this, smaller blankets are spread until a suitable bed is made. By means of these blankets, we are completely protected from the dampness of the ground. Upon such an arrangement, one can lie with comparative comfort.

Pillows.—Each student is provided with a pillow. This is usually consists of a little mus-

lĭn săck about fĭftēen ĭnchĕs lŏng, ănd about tĕn ĭnchĕs wīde,—wĕll stŭffed wĭth fĕathĕrs, ōr wĭth wo͝ol. Wĭthout a pĭllōw, a tĕntĕr ĭs bădlў prōvīdĕd fōr the nīght. It ĭs ēasĭĕr to͝ slēep wĭthout blănkĕts thăn wĭthout a pĭllōw. Whīle one can lie ēasў, ănd slēep soundlў ŭpōn a sōlĭd rŏck, ĭf hē bŭt hăs a nīce sŏft pĭllōw bēnĕath hĭs hĕad; hē lies ŭnēasў, ănd slēeps bădlў, ĭn a downў bĕd, ĭf hē ĭs ōblĭged to͝ kēep a stōne bēnēath hĭs hĕad. To͝ sēcūre rĕst fōr thĕ nīght, ănd frēedom frŏm hĕadāche, ănd to͝ prōmōte clēarnĕss ŏf ĭntĕllĕct dūrĭng thĕ dāy, a go͝od sŏft pĭllōw ĭs vĕrў ĭmpōrtant.

Victualing Apparatus.—Thĕ vĭctualĭng ăppărātŭs nĕcĕssārў for tĕntĭng, cŏnsĭsts ŏf a tāble, plātes, dĭshĕs, păns, knĭves ănd fōrks, spo͝ons, drĭnkĭng cŭps ănd fru͝it căns.

Table.—Thĕ tāble cŏnsĭsts ŏf a pŏplăr bōard two͝ ănd a hâlf fēet wīde, ănd twĕlve fēet lŏng, ärmed wĭth lĕgs, ăttăched bў mēans ŏf strŏng rĭngs ĭntĕrlŏcked līke thĕ lĭnks ĭn a chāin. Whĕn ĭn ūse, thĕ sŭrfăce ŏf thĕ tāble ĭs about two͝ fēet hīgh. To͝ sēcūre ĭt āgāinst ŭpsĕttĭng, thĕ lĕgs äre wīdĕr apärt ăt thĕ bŏttom thăn they äre ăt thĕ tŏp. It māy bē mādе mōre sēcūre still bў ĭnsĕrtĭng thĕ lōwĕr ĕnd ŏf

thĕ lĕgs ĭntọ thĕ ground. Whĕn nŏt ĭn ūse, thĕ lĕgs ŏf thĕ tāble ăre fōldĕd tōgether bēnēath thĕ bōard, ănd tĭed tọ prēvĕnt răttlĭng.

Whĕn ŭpŏn thĕ rōad, thĕ tāble ĭs cărrĭed bēnēath thĕ wăgŏn bŏdy, sŭspĕndĕd by mēans ŏf à bōlt ăt one ĕnd, ănd à străp ăt thĕ ōthĕr.

Plates.—Thĕ plātes ăre ŏf tĭn,—sŭch ăs ăre ŏftĕn ūsed ĭn thĕ ărt ŏf bākĭng pīes. Tĭn plātes ăre lĭght—ăre nŏt ēasĭly brōkĕn, ănd cân bē păcked ĭn à small spāçe. They ăre brĭght ănd ĭnvĭtĭng tọ ēat frŏm, ănd gĭve the tāble à chēerful ăppēarănçe. Of thēse, thĕre ăre ēightēen, one fōr ēach ŏf thĕ pärty.

Pans.—Tọ cŏntāin mēat, fĭsh, brĕad, vegētābles ănd thĕ lĭke bēfōre dĭstrĭbūtĭŏn tọ thŏse ēatĭng, thĕre ăre sĭx rĕctăngūlàr păns,—sŭch ăs ăre sòmetĭmes ūsed tọ bāke cāke ĭn. Thēse ăre dēepĕr thăn thĕ dĭshĕs, àbout fĭftēen ĭnchĕs lŏng ănd àbout ĕight ĭnchĕs wĭde. Tọ thēse ăre ăddĕd twọ lärge rectăngūlàr păns, fōr cŏntāinĭng whatĕvĕr māy bē à lĭttle ĕxträōrdĭnārў ĭn sīze. Thēse păns ăre àbout twọ ĭnchĕs dēep, à fọot wĭde ănd àbout twĕntў-twọ ĭnchĕs lŏng. Thēse ănswĕr ąlsō ăs frўĭng păns.

Dessert Dishes.—Tọ dĭstrĭbūte dēssĕrts, à

çĭr€ūlăr tĭn dĭsh ăbout fōur ĭn€hĕs ĭn dīămētĕr, ănswĕrs vĕrў wĕll. Thēse ăre sŭch ăs ăre ūsed ĭn bākĭng smąll €ākes ănd thĕ līke. Of thēse thĕre ăre twĕntў,—one fōr €ach ŏf thĕ pärtў, ăs ą dēsĕrt dĭsh, ănd twọ tọ bē ūsed ăs bŭttĕr dĭshĕs.

Knives and Forks.—Of knīves ănd fōrks bŭt lĭttle nēed bē sāid. Thĕre shọuld bē ăt thĕ lēăst ą knīfe ănd ą fōrk fōr €ach mĕmbĕr ŏf thĕ pärtў.

Fōr €ŭttĭng mēat, fĭsh ănd thĕ līke, thĕre shọuld bē ăbout thrēe knīves ądăptĕd tọ thĕ pŭrpōse—bụt€hĕr knīves ănswĕr vĕrў wĕll.

Spoons.—It ĭs dĭfĭ€ŭlt tọ ēat wĭthout spọọns. Upŏn thĕ tāble shọuld ąlwāys bē ą plĕntў ŏf tēaspọọns ănd tāblespọọns. Our outfĭt rēquĭres twĕntў tēaspọọns, one fōr €ach ĭndĭvĭdūąl, ănd twọ fōr dĭppĭng sụgăr ănd thĕ līke. Thĕre ăre ąlsō sĭx tāblespọọns,—ūsed fōr dĭppĭng grāvў, &c., &c.

Cups.—Fōr ūsĭng €ŏffēe, tēa, mĭlk ōr wątĕr, €ŭps ăre nēedĕd. Thĕ ōrdĭnārў tĭn €ŭp thăt hōldș ăbout ą pĭnt ănswĕrș vĕrў wĕll. It hōldș ēnoŭgh, ănd ŏn thĕ ă€€ount ŏf thĕ hăndle, ĭt ĭs ēasў ŏf ūse. Of thēse, €ightēen ăre nēeded,—one fōr €ach ŏf thĕ pärty.

Fruit Jars.—Cănned fruit ĭs ăs acĕptable tŏ thĕ crāvĭng stŏmăch ŏf a tĕntĕr ăs ĭt ĭs tŏ thăt ŏf ăn ĕpĭcūre ăt hōme. Bēsīdes, ĭt ĭs ēasў tŏ cărў, ănd ĭs ąlwāys rĕadў fŏr ūse. Bŭt, thĕ jărs, ūsūallў ĕmploўed ĭn cănnĭng fruit, sĕrve vārĭoŭs pŭrpōsĕs ŭpŏn a tĕntĭng ĕxcŭrsion. Thęy ăre cŏnvēnĭĕnt tŏ hōld vārĭoŭs dĕssĕrts ŭntĭl they ăre dĭstrĭbūted ŏn thĕ dĕssĕrt plātes, tŏ hōld prēsĕrves, pĭckles, &c., &c.

Culinary Apparatus.—Thĕ cūlĭnārў ăpparātŭs cŏnsĭsts ŏf thĕ fire ĭmplēmĕnts, pŏts, kĕttles ănd păns ūsed ĭn cooking.

Fŏr cooking, thĕ mŏst sătĭsfăctŏrў fīre thăt wē hăve ūsed hăs bēen mādе bў pĭlĭng tŏgēthĕr, ŭpŏn ăn ōpĕn spăce, făgŏts ănd wood, ăftĕr thĕ mănnĕr prăctĭced bў thĕ Indĭans. Wē hăve trĭed pōrtable stōves, thăt bŭrn chărcōal, rĕsĭn, kĕrōsēne, &c., &c.; bŭt cach ŏf thēse hăs bēen vĕrў ŭnsătĭsfăctŏrў. Bēsīdes, thęy wĕre cŭmbĕrsome. Thĕ ōrdĭnārў kĕrōsēne stōve wĭll nŏt bŭrn wĕll ĭn thĕ ōpĕn āir, ŭnlĕss thĕre bē a călm. Hĕncę, ĭt ĭs ĭmprăctĭcal. Fŭrthĕr, ĭt ĭs cŏnstrŭctĕd ŏn too small a scāle. Tŏ cook vĭctuals fŏr eightēen hŭngrў tĕntĕrs tākes wŏrk,—a lărge, brĭsk

fire, and industrious cooks. In order to spend as little time as possible at victualling, everything relating to the culinary apparatus should be the very best, large enough, and easy, and quick of use.

Unless great skill, and a good system, is practiced, there will be too much time consumed in victualling. Hence, everything must be done to expedite the operations relating to the duties of the culinary department. When hungry, at home, to wait long for victuals is very vexation; but, it is very much more so, when tenting. When tenting, the appetite is almost always craving; and, each one feels the need of his victuals at the hours at which he is accustomed to eat. But, more than all this, the more time is consumed in preparing victuals, the less there will be to devote to observation and scientific investigations.

To burn charcoal, a large stove is required. Besides, it requires too much space to carry the fuel, which is very dirty and very vexatious to manage. A fire of resin alone is not very hot, is not easy to manage, and is very smoky.

To kindle fire, we use a kind of string iron cup, fastened to an iron handle about three

fēet lŏng. This cŭp is vĕry wide ăt thĕ tŏp ănd will hōld about à quärt. In this cŭp, wē plāçe à hăndfŭl ōr mōre ŏf rĕsĭn, à gĭll ōr mōre ŏf kĕrōsēne, ănd about à tāblespoonfŭl ŏf à mĭxtūre, cōnsĭstĭng ŏf one pärt ŏf ēthĕr ănd fōur pärts ŏf alcōhŏl. At fĭrst thŏught, this māy sēem to bē à vĕrў ĭncŏmpătible mĭxtūre; but, ŏf ĭts prăctĭce vălūe, wē hăve mŭch ĕvĭdĕnçe. To stärt à fĭre ĭn wĕt wood, dŭrĭng à răinў dāy, ŭndĕr ōrdĭnārў çĭrcŭmstănçes, ĭs nŏt ēasў; bŭt, with thĕ ărrāngemĕnt, ănd thĕ fŭĕl àbŏve nāmed, ĭt ĭs rĕadĭlў ĕffĕctĕd.

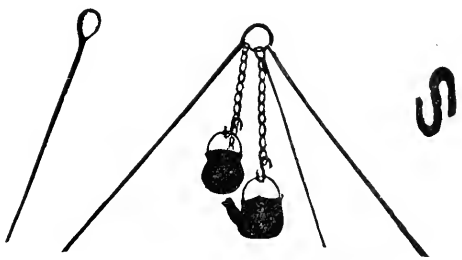
To ĭgnīte rĕsĭn, ĭn thĕ ōpĕn āir, with ăn ōrdĭnārў măteh, ĭs ąlmōst ĭmpŏssĭble. To ĭgnīte kĕrōsēne ĭn thĕ ōpĕn āir with à măteh, ĭs nŏt ēasў; and to fĭre ălcōhŏl ĭn ăn ōpĕn păn, with à măteh, ĭs nŏt dōne ăt ĕvĕry trĭăl. Each ŏf thēse sŭbstănçes rēquīre to bē hēatĕd ŭp to à çĕrtaĭn point,—thĕ kĭndlĭng point, bĕfōre they will ĭgnīte. To rāise thĕ tĕmpĕrătūre ŏf ēithĕr ŏf thēse to thĕ kĭndlĭng point, rēquĭres mōre hēat thăn ĭs dēvĕlŏped bў thĕ bŭrnĭng ŏf à măteh; bŭt, ēthĕr ĭs sọ vŏlătĭle, that whĕn pōurĕd out, ĭts vāpōr ĭnstăntlў rĭsĕs. This vāpōr fĭres ăt sọ low à tĕmpĕrătūre, that whĕn à bŭrnĭng măteh ĭs brŏught ĭn cŏntăct with ĭt,

ĭt ĭgnītes wĭth ĕxplōsĭve vĭōlĕnce, ănd cŏntĭnūes tọ bŭrn wĭth vĭgōr ŭntĭl cŏnsūmed. Whīle bŭrnĭng, thĕ hēat gĕnĕrātĕd, ēvăpōrātes thĕ ălcōhŏl, rāisĕs thĕ tĕmpĕrătūre ŏf thĕ ălcōhŏlĭc vāpōr tọ thĕ bŭrnĭng poĭnt, ănd ĭgnītes ĭt. Bў thĕ bŭrnĭng ŏf thĕ ălcōhŏl, thĕ kerōsēne vāpōr ĭs rāised tọ thĕ kĭndlĭng poĭnt, ănd ĭs ĭgnītĕd. Thĕ bŭrnĭng ŏf thĕ kĕrōsēne sọon dēvĕlŏps hēat ēnoŭgh tọ lĭquĭfў thĕ rĕsĭn, ēvăpōrātes ĭt ănd ĭgnītes ĭt. At thĭs jūnctūre, à pärt ŏf thĕ kĕrōsēne ănd rĕsĭn bēgĭns tọ bē cŏnvĕrtĕd ĭntọ à gäs thăt măkes à hōttĕr blāze thăn thăt mādе bў bŭrnĭng cĭthĕr kĕrōsēne ŏr rĕsĭn ălōne; bēsĭdes, ăttĕndĭng thĭs fĭre ĭs mŭch lĕss smōke thăn ĭs mādе bў thĕ bŭrnĭng ŏf rĕsĭn ălōne.

Thĕ cŭp ŏf bŭrnĭng kĕrōsēne ănd rĕsĭn, whĕn plācĕd ŭndĕr à hēap ŏf wọod thăt ĭs nŏt tọo wĕt, sọon rāises thĕ fūĕl tọ thĕ kĭndlĭng poĭnt, ĭgnītes ĭt ănd gĭves tọ thĕ fĭre sŭch ĭmpĕtūŏsĭtў thăt ĭt măkĕs wạtĕr boĭl quĭcklў, ănd bŭttĕr tọ frў ănd spŭttĕr fūrĭoŭslў.

Wĭth thĕ cŭp ălōne, chärged ăs ăbŏve dīrĕctĕd, I hăve boĭled à twọ găllŏn tēa kĕttle ŏf wạtĕr ĭn eight mĭnŭtes. Bŭt, thĭs cọuld nŏt hăve bēen dọne ĭn à wĭndy dāў.

It would be criminal to make the above statement, respecting the iron cup and the fuel to be used with it, without informing the tiro that it is very dangerous. Should any one attempt to use it, he cannot be too careful. The act of touching it off with a match, unless carefully done, may prove very disastrous. The results of using this mixture without sufficient precaution we have seen. Suffice it to say, they were terrible.



Tripod and Kettles.

Fire Irons.—To suspend pots and kettles over the fire, we use a tripod, made of three iron rods about five eighths of an inch thick and six feet long. At one end, each of these rods is armed with a ring. To form a tripod, through each of these rings a chain is so extended as to securely bind them together while

thĕ ȯthĕr ĕnds̲ äre sĕt ȧpärt, ĭn sŭch ȧ wāy thăt ēach rĕsts ŭpŏn ȧ point thăt māy bē cŏnçeivĕd to̤ märk ăn ăn̲gle ŏf ăn ēquīlătĕrȧl trīăn̲gle.

Thŭs ărrānġed, to̤ thĕ rĭn̲gs̲ ăs̲ mānў pĕndănt chāins̲ māy bē fȧstĕned as̲ thĕre äre pŏts ănd kĕttles̲ to̤ bē hēatĕd ōvĕr thĕ fīre. Thĕ fȧstĕnĭn̲g ŏf thĕ chāins̲ to̤ thĕ rin̲gs̲ ŏf thĕ trīpŏd ĭs̲ ĕffĕctĕd bȳ ȧ hoȯk; bŭt, to̤ ăttăch ȧ pŏt to̤ thĕ chāin, ȧ piēçe ŏf īrȯn bĕnt ĭnto̤ sŭch ȧ shāpe ăs̲ to̤ rēs̲ĕmble thĕ lĕttĕr S ĭs̲ vĕrў cŏnvēnīĕnt. Thĭs S hoȯk ăllows̲ one to̤ ĕlĕvāte ōr lŏwĕr ȧ pŏt ăt wĭll, bȳ sĭmplў hoȯkĭn̲g thĕ S hoȯk ĭnto̤ ȧ hīghĕr ōr ȧ lōwĕr lĭnk ŏf thĕ chāin, ăs̲ thĕ heīght, ōr thĕ ĭmpĕtūōŭsnĕss ŏf thĕ fīre māy rēquīre.

Thĕ flĕxībĭlĭtў ŏf thĕ chāin ăllows̲ ȧ pōt to̤ bē swŭn̲g frŏm thĕ fīre quĭcklў, ĭf nēed bē. Thĭs ĭs̲ ȧ ḡreāt ădvăntāġe sĭnçe ovĕr ȧ răpĭd fīre, thĕ wa̤tĕr ĭn ȧ pŏt ŏftĕn boils̲ wĭth sŭch vīōlĕnçe thăt ĭt ōvĕrflōws̲ ĭn ăn ĭnstȧnt ăftĕr ĕbūllĭtiȯn bēḡĭns̲. Unlĕss̲ thĕ vĕssĕl căn bē quĭcklў rēmo̤vĕd frŏm thĕ fīre, thĕ cŏntĕnts ŏf thĕ vĕssĕl ĭs lŏst, ōr dămāġed. Cŏffēe, ĕspĕçiȧllў, ĭs̲ līȧble to̤ lŏss bȳ ōvĕrflōw, ĭf boiled ōvĕr ȧ răpĭd fīre,

Tripod and Cooking Utensils.

Ring Tripod.—A tripod made of a ring armed with three legs about a foot long is very convenient. Indeed, in cooking with the frying pan, it is so necessary to have a support for the pan, that this implement is almost indispensable. For it, a separate fire may be built out of some small wood; or, a quantity of glowing embers from the larger fire may be drawn out, and over them it may be placed. Thus arranged, frying may be done quickly, and with a moderate amount of labor.

The ring of this tripod is made of a square bar of iron about five-eighths o. an inch thick. The diameter of the ring is about 12 inches. To guard against upsetting and to give space for the fire, the legs diverge.

Pots.—Pots are cumbersome to carry. Yet, a three gallon iron pot, for boiling potatoes, eggs, &c., &c., is almost indispensable. As a substitute, we have sometimes used a common milk pan. But, this substitution is not very

sătĭsfăctōrў. Thĕ păn dŏĕs nŏt hōld ēnoŭgh. Thĕ ĭntĕnse hēat ŏf sọ lärge à fīre sọon blăckĕns thĕ păn ănd mĕlts thĕ sŏldĕrĭng, ănd thŭs rụĭns ĭt.

Kettles.—A lärge ĭrŏn tēa-kĕttle ănswĕrs vĕrў wĕll fŏr cọokĭng cŏffēe. It ĭs cāpāçioŭs, ănd ĭs quĭte mănāgeable. It ĭs ŏftĕn ūsable fŏr ŏthĕr pŭrpōsĕs. In ăddĭtiọn tọ thĭs, à smạllĕr kĕttle ĭs ŏftĕn nēedĕd.

Pans.—Twọ frўĭng păns fŏr cọokĭng mēat ănd fĭsh äre ĭndĭspĕnsable. Thẹў shoŭld bē lärge, ănd ēach shọuld bē ärmed wĭth à lŏng hăndle. Thōse bēlŏngĭng tọ our out-fĭt äre 16 ĭnchĕs ĭn dīămētĕr. Each one hăs à strŏng flăt hăndle àbout twọ fēet lŏng. Whĕn plācĭng thĕ păn ŭpŏn thĕ fīre, ōr rēmọvĭng ĭt frŏm thĕ fīre to thĕ hăndle, bў mēans ŏf sūitablў fōrmed lọops, à flăt bär ŏf ĭrŏn, àbout fĭve fēet lŏng, ĭs ăttăched. A păn wĭth à hăndle sĕvĕn fēet lŏng would bē vĕrў ŭnhăndў, ŭpŏn à tĕntĭng tọur; bŭt, fĭxed ĭn thĕ wāy àbọve stātĕd, thĕ hăndle dĭsjoins whĕn ĭt ĭs tọ bē păcked àwāy; ănd, thŭs dĭsjoined, ĭt căn bē pụt àwāy wĭth vĕrў lĭttle troŭble.

CHAIR.

Chairs.—Upŏn ȧ tĕntĭn̲g to̤ŭr, Ⱬhāirs̲ äre vĕrў Ⱬŏnvēnīĕnt. Thĕ Ⱬhāirs̲ ūsed bȳ ŭs äre māde sȯmewhạt ȧftĕr Ⱬhĕ stȳle ŏf ȧ Ⱬămp Ⱬhāir. Whĕn nŏt ĭn ūse, Ⱬhey äre fōldĕd to̤gĕⱫhĕr, ănd äre păckeđ ȧwāy wĭthout mŭⱫh troŭble. Usūăllў wē străp Ⱬhĕm ŭpŏn Ⱬhăt ĕnd ŏf Ⱬhĕ tȧble Ⱬhăt prōjĕⱫts frŏm Ⱬhĕ vēhĭⱫle. Bŭt, Ⱬhāirs̲ äre Ⱬŭmbĕrsȯme, ănd ădd mŭⱫh to̤ Ⱬhĕ lōad. And nō mōre ŏf Ⱬhĕm Ⱬhọuld bē tākĕn Ⱬhăn ĭs̲ nēedĕd.

Spade.—To̤ dĭg trĕnⱫhĕs̲ ăround Ⱬhĕ tĕnts ĭn tĭme ŏf stōrm, ȧ spāde ĭs̲ ūsefụl.

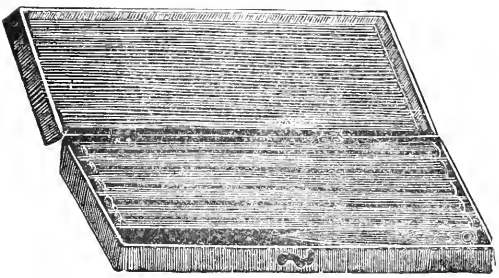
Lanterns and Candles.—To̤ ĭllūmĭnāte, wē ūs̱ūȧllў ūs̱e lăntĕrns̱ ănd ꞓăndles̱. One ōr mōre lăntĕrns̱ äre a̤lwāys̱ nēedĕd to̤ ĭllūmĭnāte, ĭn ꞓāse, fōr ănў ꞓa̤us̱e, wē ꞩho̤uld bē bēnīghtĕd, ōr ꞩho̤uld nēed to̤ ăttĕnd ꞇhĕ tēam, ĭn ꞇhĕ nīght. Thēse lăntĕrns̱ ăꞓt ēquȧllў wĕll to̤ ĭllūmĭnāte ꞇhĕ tĕnt. Alꞇhō wē rētīre ĕarlў, yĕt ŏftĕṉtĭmes̱, sȯme one, ōr ones̱, wĭꞩh to̤ wrīte ăt nīght. Thĕn ꞇhĕ lăntĕrn sĕrves̱ wĕll.

Căndles̱ äre ūsefṳl. Bŭt, ŭnlĕss ꞇhĕ äir ĭs̱ ꞓȧlm, ꞇhe̱y flĭckĕr ănd ḡō out. As̱ ȧ rṳle, ꞇhe̱y äre vĕrў ŭnsătĭsfăꞓtōrў. Two̤ go̤od lăntĕrns ūs̱ūȧllў sŭffīçĕ fōr a̤ll pŭrpōsĕs̱.

EQUIPMENTS FOR STUDY.

To̤ măke ȧ tĕntĭṉg trĭp prŏfĭtȧble, ēaꞓh Stūdĕnt mŭst bē ēquīppeđ wĭꞇh sūitȧble to̤ols. Eaꞓh Stūdĕnt ŏf Gēŏgrȧphў mŭst bĕ ärmed wĭꞇh hĭs̱ ꞓāse ŏf dra̤wĭṉg to̤ols ănd dra̤wĭṉg ꞓärds̱ fōr mākĭṉg măps ănd dra̤wĭṉg skĕtꞓhĕs̱; ȧ tĕlēsꞓōpe fōr viewĭṉg dīstȧnt ŏbjĕꞓts, ănd ȧ pŏckĕt ꞓŏmpȧss fŏr dē-

tĕrmĭnĭng thĕ pōsĭtĭon ŏf thĕ cărdĭnăl points, ănd ă bărŏmĕtĕr tŏ ăscĕrtăin thĕ ăltĭtūde ŏf hĭlls. Each Stūdĕnt ŏf Bŏtănў mŭst hăve wĭth hĭm ă flōră,—fŏr dĕtĕrmĭnĭng thĕ gĕnĕră ănd spĕcĭes ŏf plănts, ă plănt bŏx fŏr cărryĭng frĕsh plănts, ă bŏx ŏf dĭssĕctĭng tŏols fŏr dĭssĕctĭng plănts, ă mĭcrōscōpe fŏr ĕxămĭnĭng thĕ mĭnūte pärts ŏf plănts, ănd ă drўĭng cāse fŏr prēsĕrvĭng sŭch spĕcĭmĕns ăs ăre dēsĭred for ă hĕrbărĭŭm. Each Stūdĕnt ĭn Zōŏlōgў mŭst bē prōvĭdĕd wĭth ă cāse ŏf dĭssĕctĭng tŏols fŏr thĕ dĭssĕctĭon ŏf ănĭmăls, ă mĭcrōscōpe fŏr thĕ ĕxămĭnātĭon ŏf thĕ mĭnūtĭae ŏf ănĭmăls, ănd jărs wĭth ălcōhŏl fŏr thĕ prēsĕrvātĭon ŏf Ănătŏmĭc ănd Zōŏlōgĭc spĕcĭmĕns. Each Stūdĕnt ĭn Gēŏlōgў mŭst bē ēquĭppĕd wĭth ă hămmĕr fŏr drĕssĭng spĕcĭmĕns, ă clĭnŏmĕtĕr fŏr dĕtĕrmĭnĭng thĕ dĭp ŏf strātă, ă cŏmpăss fŏr dĕtĕrmĭnĭng thĕ cărdĭnăl points ănd thĕ trĕnd ŏf strĭke, ă stēel chĭsĕl fŏr drĕssĭng ōr bōrĭng rŏcks, ă smăll măgnĕt tŏ dĕtĕrmĭne thĕ cŏndĭtĭon ŏf ĭrŏn ōre, ănd ă meāsūrĭng tāpe.



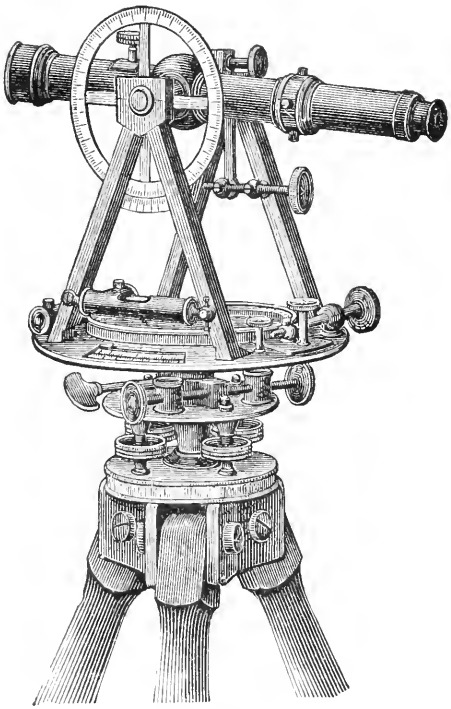
Case of Drawing Tools.

Drawing Tools.—To make maps of localities visited for the purpose of study, is very essential. At such times as the Student may wish to review what he saw and learned while upon a tenting trip, these maps are all important. They serve to point out with precision the exact spot of encampment, of an action in a battle, of the location of the residence of a distinguished individual, of the site and plan of a village, or a city, or a hill, or a mountain, of the relation of the ocean to the shore, of the course of streams, of the direction of roads, of the location of lakes and ponds, and of their environ. To construct such a map, one must have with him the tools necessary to draw with, and the paper upon which the

dra̤wĭn̲g ĭs̲ to̤ bē māde. Thĕ ꞓāse ŏf dra̤wĭn̲g to̤ols, ūs̲ed ĭn ꞇhĕ Aꞓădēmy̆, ĭs̲ pēꞓūlĭărly̆ wĕll ădăptĕd to̤ ꞇhĭs bus̲ĭnĕss; ănd, ōrdīnăry̆ brĭstŏl bōard ănswĕrs̲ vĕry̆ wĕll, fōr ꞇhĕ ḡround-wȯrk ŏf ȧ măp.

Măps ꞩho̤uld a̤lwāys̲ bē măde wĭꞇh ḡreāt ꞓāre. The̤y ꞩho̤uld bē māde ŭpŏn ȧ sꞓāle lärġe ēnoŭgꞩh to̤ rĕprēs̲ĕnt bōldly̆ ꞇhĕ pärtĭꞓūlȧr fēatūres̲ whĭꞓh wē ĭntĕnđ to̤ măp out. A ꞓrămpĕd ōr nărrōw ănd ĭlly̆ ĕxēꞓūtĕd măp ĭs̲ ȧ ꞇhĭn̲g ŏf ŭḡlĭnĕss, ănd ŏf vĕxāṭiȯn, ănd ōnly̆ sūitĕd to̤ mĭslēad. Thĕ mŏttō ŏf ꞇhĕ Gēŏgrȧphĕr ꞩho̤uld bē: A go̤od măp, ōr nō măp ăt a̤ll.

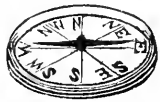
Whĕn māde, ȧ măp ꞩho̤uld bē ꞓārefṳlly̆ prēs̲ĕrved. As̲ ȧ rṳle, ĭts vălūe ĭnꞓrēasĕs̲ ăs̲ ĭt ḡrōws̲ ōldĕr.



THEODOLITE.

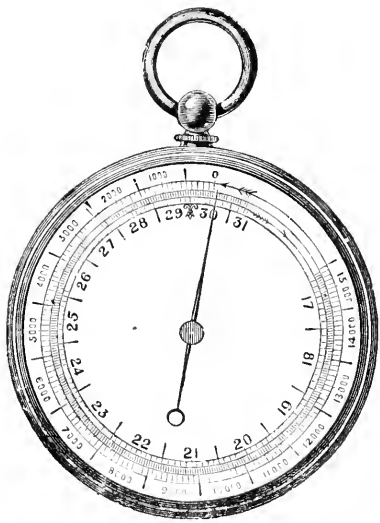
Compass.—A sŭrvĕyŏr's cŏmpass, ōr a thĕŏdōlīte, ĭs quīte ĭndĭspĕnsable tŏ a pärtў măkĭng sçĭĕntĭfĭc ŏbsĕrvāțiŏns, ēithĕr gēōgrăphĭc ōr gēōlŏgĭc. Of thĕ twŏ, a thēŏdōlīte ĭs bĕttĕr. Wĭth ĭt, one māy tāke, nŏt ōnlў thĕ dĭstançe ŏf rēmōte ănd ĭnaccĕssĭble ŏbjĕcts, thĕ beārĭngs ănd thĕ dīmĕnșiŏns ŏf ārēas tŏ bē măppeđ; bŭt, hę māy ąlsō tāke thĕ ĭnclīnāțiŏns ŏf mountaĭn sīdes, ănd ŏf plāins. And wĭth ĭt,

hē māy ăsçĕrtāin ŧhĕ heīghts ŏf ĭnăɛçĕssīble mountaĭn pēaks, ŏf ɛlĭfls ănd ɛrăg̱s̱.



COMPASS.

One ŧhēŏdōlīte ănswĕrs̱ fōr ŧhĕ whōle pärtў. Bŭt, to̤ hāstīlў ăsçĕrtāin ŧhĕ ɛărdīnal points, whĕn tīme ĭs̱ to̤o prĕçioŭs to̤ ăllow ŏf ŭnpăckĭṉg ŧhĕ ɛŭmbĕrsome ŧhēŏdōlīte, a smạll pŏcket ɛŏmpass ăṉswĕrs̱ vĕrў wĕll. Wĭŧh one ŏf ŧhēs̱e, ĕvĕrў Stūdĕnt shọuld bē prōvīdĕd. Thĕ ɛŏst ŏf ŧhĕ pŏɛkĕt ɛŏmpass nēed nŏt bē mŭɛh —25 to̤ 50 cts.



ANEROID BAROMETER.

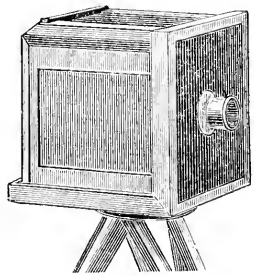
Barometer.—To ăsçĕrtāin thĕ heights ŏf hĭlls ănd mountaĭns ĭs ŏftĕn vĕrў ĭmpōrtant. Whĕn ecovĕred wĭth trēes, ōr bŭshĕs, ŭnlĕss sŏme sĭgnăl ŏbjĕct thăt ĭs elēarlў vĭsĭble to ă grēāt dĭstançe bē ĕstăblĭshed ŭpŏn thĕ ĕlēvāțiŏn, thĭs ecămŏt bē dŏne wĭth thĕ thēŏdōlīte. In sŭch eāsĕs, thĕ bărŏmētĕr ĭs thĕ ĭnstrūmĕnt to bē ūsed.

Thē mountaĭn bărŏmētĕr, now ĭn ūse, ĭs ă thĭng ŏf pĕrfĕcțiŏn. It ĭs sō nīçelў ădjŭstĕd thăt meāsŭrĕmĕnts ŏf ă hŭndrĕdth, ōr ēvĕn ŏf ă thousăndth ŏf ăn ĭnch, ăre tākĕn. Bŭt, ōwĭng to thĕ lĕngth ŏf thĕ ĭnstrŭmĕnt (about 3 fēet) ănd to ĭts weight, ĭt ĭs vĕrў ecŭmbĕrsŏme. Bēsīde, bēĭng eŏnstrŭetĕd māinlў ŏf glăss, ĭt ĭs vĕrў breākable.

To ăsçĕrtāin ăpprŏxĭmātelў thĕ ăltĭtūde ŏf ĕlĕvāțiŏns, thĕ Anĕroid Bărŏmētĕr ĭs now mŭch ĭn ūse. In shāpe, thĭs ĭnstrŭmĕnt ĭs çĭrecūlăr. In sīze, ĭt ĭs vĕrў eŏnvēnĭent. It māy bē mādе so small ăs to bē eărrĭed ĭn thĕ vĕst pŏckĕt. Usŭallў, ĭt ĭs about thrēe ĭnchĕs ĭn dĭămētĕr, ănd about ăn ĭnch ănd ă quartĕr ĭn thĭckněss. It ĭs eăsĭlў rĕad; bŭt nŏt wĭth thăt dēgrēe ŏf ăccūrāçў with whĭch thĕ Mountaĭn Bărŏmētĕr ĭs rĕad. Nŏr ĭs thĭs ĭnstrŭ-

mĕnt sō rĕlīable ăs thĕ Mountaĭn Bărŏmētĕr. Thĕ bĕst ŏf Aneroids, whĕthĕr new ōr ōld, cannŏt bē trŭstĕd, fŏr ăccūrācy, ŭndĕr ăny çĭrcŭmstănçĕs. Bŭt, tŏ ăsçĕrtāin ăn ăpprŏxĭmāte ăltĭtūde, they ăre hăndy ănd ănswĕr wĕll.

Whĕn thĕ ăltĭtūde ŏf ăn ĕlĕvāțion ĭs dĕtĕrmĭned by ăn Aneroid Bărŏmētĕr, thĕ rĕcord should ălwāys bē mādе ĭn sŭch ă wāy ăs tŏ shōw thăt thĕ work was dŏne wĭth thĭs kĭnd ŏf ĭnstrŭmĕnt. Thĕn, ănỹ one who hăs hăd ĕxpĕrĭĕnçe wĭth bŏth Mĕrcūrĭăl ănd Aneroid Bărŏmētĕrs wĭll nŏt ĕxpĕct thĕ fĭgūres tŏ ĕxprĕss ănythĭng mŏre thăn ăn ăpprŏxĭmāțion.



Camera.

Camera.—Tŏ sēcūre phŏtŏgrăphs ŏf rāre ŏbjĕcts ănd ŏf rāre sçĕnĕrỹ ĭs ălwāys dēsĭrable. Thĭs cannŏt bē dŏne wĭthout ă cămĕră ănd sūitable plātes.

Thĕ phŏtŏgrăphĭc ărt hăs now sō făr ăd-

vănçeđ ŧhăt ănў ăpt pĕrsȯn căn, ĭn ȧ few lĕssȯns, lĕarn to̤ ărrānġe ŧhĕ ɛămērȧ ănd ĕxpōse ŧhĕ plātes fōr tākĭn̲g nĕḡȧtĭves̲.

Bēsīdes̲ ŧhĕ vălūe ŏf ŧhĕ phōtōḡrăphs fōr kēepĭn̲g ăs̲ sŭɛh, ŧhe̤y hăve ănȯthĕr vălūe. Frŏm ŧhĕ phōtōḡrăph, ĕnḡrāvĭn̲gs ɛăn ēȧsīlў bē māde. Thēs̲e ɛăn bē ūs̲ed to̤ ădvăntāġe ĭn ĭllŭstrātĭn̲g măḡȧzïne ărtĭɛles, ɛhăptĕrs̲ ĭn bo̤oks, &c., &c.

Thĕ ɛămĕrȧ now ĭn ūse bȳ ŭs ĭs̲ ŧhat ɛŏnvēnịĕnt lĭttle ŧhĭn̲g ĕntītled "Thĕ Knŏckdown Cămērȧ," māde ănd fōr sāle bȳ Thĕ Blāir To̤urōḡrăph ănd Drȳ Plāte Co., 471 Trēmŏnt Strēet, Bŏstȯn, Măss.

Thĕ nĕḡȧtĭves̲ tākĕn bȳ ŧhĭs ɛămērȧ äre sma̤ll; bŭt, to̤ ĕnḡrāve frŏm, ŧhe̤y do̤ vĕrў well.

Fōr lărġĕr phōtōḡrăphs, ȧ mōre ĕxpĕnsìve ꞓămērȧ ĭs̱ rēquīred. Sŭꞓh äre mănūfăꞓtūred ănd fōr sāle bȳ ꞇhĕ sāme ꞓŏmpāny.

THERMOMETER.

Temperature.—To̤ dētĕrmĭne ꞇhĕ tĕmpĕrātūre ŏf ȧ plāçe, ꞇhĕ dĭffĕrĕnçe ŏf tĕmpĕrātūre dēpĕndȧnt ŭpŏn dĭffĕrĕnçe ŏf ĕlēvāṭiȯn, ꞇhĕ tĕmpĕrātūre ŏf sprĭṉgs, &c., ȧ thĕrmŏmētĕr ĭs̱ ĭndĭspĕnsȧble.

TELESCOPE.

Telescope.—Objĕꞓts ĭn ꞇhĕ dĭstȧnçe, sō fär

ȧwāy ŧhăt ŧhĕ pūpĭl ɛăn ōnlў dēsɛrȳ ŧhĕm, äre ĕvĕr ănd ȧnŏn ăppēarĭn̲g. Dĭstȧnt spīres̲ pēer ŭp, ŧhĕ ɛŭrlīn̲g smōke ŏf dĭstȧnt wȯrkshŏps ăsçĕnd, mountaĭn pēaks ăppēar ĕnshroudĕd ĭn ŧhĕ dĭstȧnt ăzūre, ŧhĕ plȳĭn̲g stēamĕr vănĭshĕs̲ ōvĕr ŧhĕ hĭll ŏf ŧhĕ ōçeȧn, ănd ŧhĕ tŏp-sāil ŏf ŧhĕ dĭstȧnt shĭp sēems̲ bŭt ȧ spĕck ŭpŏn ŧhĕ dĭstȧnt hōrīzŏn. To̤ dēfīne ŧhēs̲e, ănd to̤ dētĕrmĭne ŧhe̲ir rēlāṭiȯn to̤ ȯthĕr ŏbjĕɛts, ĭs̲ ăn ĕxquĭsĭte dēlīght to̤ ĕvērў ărdĕnt stūdĕnt. In ŧhĭs, hē fīnds̲ ūse fōr hĭs̲ tĕlēsɛōpe. And, sŏrrў ĭs̲ ŧhĕ stūdĕnt who̤ hăs̲ nŏt one ăt hĭs̲ ɛŏmmănd.

Thĕ tĕlēsɛōpe shọuld nŏt bē sō lärġe ăs̲ to̤ bē ɛŭmbĕrsȯme, ōr dĭffīɛŭlt to̤ hăndle. I hăve sēen, ȧmŏn̲g our stūdĕnts, mănў smạll ĭnstrụ̤mĕnts, bŏught fōr ȧ few dīmes̲, ŧhăt hăve dȯne ĕxçĕllĕnt sĕrvĭçe. To̤ bē sūre, ŧhĕ bĕttĕr ŧhĕ ĭnstrụ̤mĕnt, ŧhĕ mōre sătĭsfăɛtōrў ĭs̲ ŧhĕ wȯrk dȯne bȳ ūs̲ĭn̲g ĭt. Bŭt, ĭt shọuld bē rēmĕmbĕred, ŧhăt ŧhĕ ɛŏst ŏf ăn ĭnstrụ̤mĕnt ĭs̲ nŏt ăn ĕxpōnĕnt ŏf ĭts vălūe.

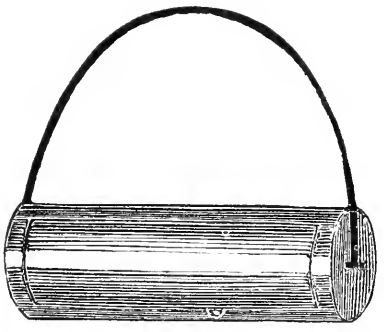
An ŏpērȧ ḡlȧss, fōr sȯme pŭrpōsĕs̲, ĭn lăndsɛāpe viewĭn̲g wȯrks wĕll. It ĭs̲, vĕrў ēasў to̤ ădjŭst, ănd vĕrў ēasў to̤ ŧhĕ eȳes̲.

As̲ ĭt ĭs̲ härdlў pŏssīble fōr ĕvĕrў one to̤ bē

prōvĭdĕd wĭth ȧ lärġe tĕlēsĕōpe, thĕre ĭs one mountĕd ŭpŏn ȧ trīpŏd whĭch ȧlwāys gōes wĭth ŭs, ȧnd ĭs ĕvĕr rĕadў fōr ūse. Whĕn ŏbjĕcts ȧt ȧ ġrēȧt dĭstȧnçe ȧre tọ bē viewed, thĭs ĭnstrụmĕnt ĭs ĭn ġrēȧt rēqụĭsĭt. Bēĭng mountĕd ŭpŏn ȧ trīpŏd, one cȧn sĭt ȧnd lēisūrelў view, wĭthout thĕ ĕffŏrt rēqụīred tọ hōld ȧn ĭnstrụmĕnt stĕadў ĭn hĭs hȧnds.

BOTANY.

Flora.—Thĕ yoŭng bŏtȧnĭst sĕrves hĭmsĕlf wĕll, bў prōcūrĭng ȧ gọod Flōrȧ. Dūrĭng hĭs fĭrst stĕps ĭn thĭs lĭne ŏf stŭdў, ȧmŏng thĕ thĭngs thȧt hē wĭshes tọ knōw, ĭs thĕ nāme, thĕ spēçĭes, thĕ ġĕnĕrȧ, thĕ ōrdĕr ȧnd thĕ clȧss ŏf ēach new plȧnt wĭth whĭch hē bēcomes ȧcquāintĕd. Tọ lĕarn thēse fȧcts, ūsūȧllў, rēquĭres ȧ Flōrȧ. Fōr thĕ plȧnts ĭn thĭs lătītūde, Wọod's ōr Grāy's, ȧnswĕrs wĕll. If one ĭs gōĭng through thĕ pĭnes ŏf N. J., Wĭllĭs' Cătȧlōgŭs Plăntȧrŭm ĭn Nōvȧ Caesȧrĕȧ Rēpĕrtȧrŭm ĭs ȧ dēsĭrȧble cŏmpănịŏn,—one cȧn hărdlў ăffōrd tọ bē wĭthout ĭt.



PLANT BOX.

Plant Box.—To̤ ꞓărrў ꞓhoiçe spĕçīmĕns̱, ănd to̤ prēsĕrve new plȧnts ĭn ȧ frĕsh ꞓŏndĭ-ṭiȯn, ŭntĭl ȧ sūitȧble ŏppōrtūnĭtў prēs̱ĕnts fōr dĭssĕꞓtĭṉg ꞓhĕm, ꞓhĕ plȧnt bŏx ĭs̱ ĭndĭspĕnsȧble. Eaꞓh stūdĕnt shọuld hăve one. It shọuld bē māde ŏf tĭn, wa̤tĕr tīght, ȧbout twĕntў ĭnꞓhĕs̱ lŏṉg, wĭꞓh ĕllĭptĭꞓ ĕnds̱, ꞓhĕ lŏngĕr dīămētĕr ŏf whĭꞓh shọuld bē nīne ĭnꞓhĕs̱, ꞓhĕ shōrtĕr sĕvĕn, wĭꞓh ȧ dōor ꞓhăt ĕxtĕnds̱ a̤lmōst frŏm ĕnd to̤ ĕnd. Thĕ dōor shọuld ꞓlōs̱e tīghtlў, ănd fȧstĕn sēꞓūrelў. To̤ ēaꞓh ĕnd shọuld bē fȧstĕned ȧ tĭn lo̤op. To̤ ꞓhēs̱e lo̤ops shọuld bē ăttăꞓhed ꞓhĕ ĕnds̱ ŏf ȧ străp ĭn sŭꞓh ȧ wāy ꞓhăt ꞓhĕ bŏx ꞓăn bē ꞓărrĭĕd ŭpŏn ꞓhĕ lĕft sīde, whīle ꞓhĕ străp, bȳ whĭꞓh ĭt ĭs̱ sŭspĕndĕd, pȧssĕs̱ ōvĕr ꞓhĕ rīght shōuldĕr.

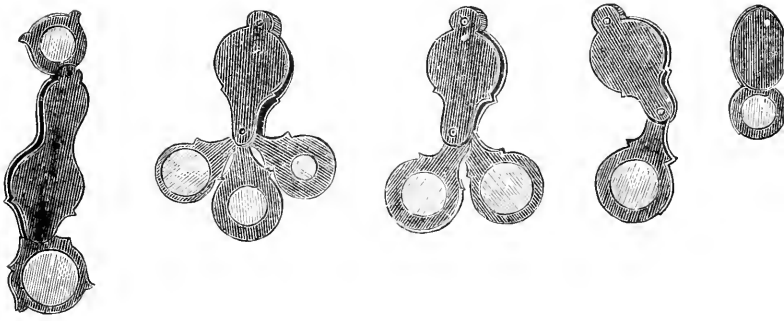
Sŭꞓh ȧ bŏx ĭs̱ ēas̱īlў ꞓărrĭĕd, ănd ĭn ĭt, plȧnts

may be kept fresh and good for analysis, for several days. When placed in the box, they should be made moist by sprinkling a little water over them.

Sometimes in by-places, in marshes, or upon mountain sides, where there is no opportunity for analysis or dissection, rare plants are found in great abundance. From such localities only, can they be gathered. But, once gathered and carefully packed in the plant box, they may be transported a great many miles, if needs be, and securely kept until circumstances are altogether favorable for a thorough examination.

Knives for Digging.—In securing a plant for dissection and analysis, all parts must be kept intact. Of a plant, the root is an essential part, and, to the botanist, one from which he learns many lessons. To secure the roots of a small plant, a large sharp pointed knife is a very useful tool. It should be strong, and have a large handle. An old butcher knife answers well. In stony ground, a large oyster knife is very useful.

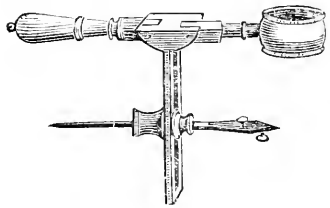
In every plant box, some such knife should be carried.



Microscope.—To ĕxămĭne thĕ tĭssūe ŏf plănts, their mĭnūte ōrgăns, &c., &c., mĭcrōscōpes ăre nēedĕd. Fōr mōst pŭrpōsĕs, outsīde ŏf thĕ lăbōrătōrў, thĕ sĭmplĕr fōrms ŏf thĭs ūsefŭl măchĭne ăre ăll thăt ĭs nēedĕd. A sĭmple lĕns dŏes gŏod sĕrvĭce. A doŭble lĕns dŏes bĕttĕr. A cāse ŏf thrēe gŏod lĕnsĕs dēfines ălmōst ănў ŏf thĕ mĭnūte ōrgăns wĕll ēnŏŭgh fōr thĕ stūdĕnt ĭn sўstĕmătĭc Bŏtănў.

Thĕ thrēe lĕnsed ĭnstrŭmĕnt mādе ănd sōld bў J. W. Quēen & Cō., 924 Chĕstnŭt St., Phĭlădĕlphia, Pa., ĭs vĕrў gŏod. (Thĕ sĕvĕrăl mĭcrōscōpes fĭgūred ănd dēscrĭbed ĭn thĭs ărtĭcle, ăre mănūfăctūred ănd fōr sāle bў thĭs fĭrm, J. W. Quēen & Cō., 924 Chĕstnŭt St., Phĭlădĕlphia, Pa. Of thĭs fĭrm wē hăve pŭrchāsed ŏptĭcăl ănd ŏthĕr ĭnstrŭmĕnts fōr ōvĕr 20 yēars. Dūrĭng our acquaintănce, wē

hăve found thĕ mĕmbĕrs ŏf thĕ fĭrm tŏ bē vĕrў rēlīable ănd vĕrў accŏmmŏdātĭng gĕntlemĕn.)

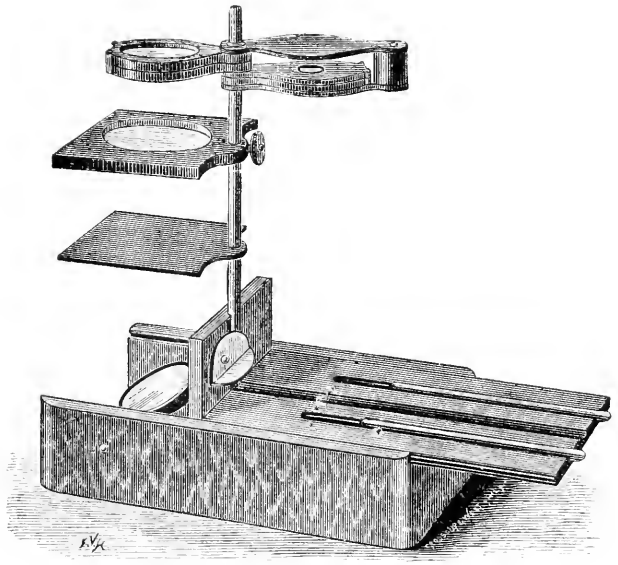


Jointed Microscope.

The Jointed Microscope, thăt fōlds tŏ cărrў ĭn thĕ pŏckĕt, ĭs a vĕrў sĕrvĭceable lĭttle cŏmfŏrtĕr ĭn mănў a pĕrplĕxĭng ĕxămĭnātĭŏn. Indēed, ĭt ĭs ăn ĭnvălūable cŏntrīvănce. It ĭs sō ărrānged thăt ĭt hōlds thĕ ŏbjĕct bĕtwēen thĕ dĕlĭcāte points ŏf a mŏvable plī ărs thăt căn bē fĭxed bў mēans ŏf a screw ăt ănў dĭstănce frŏm thĕ lĕns thăt māy bē dēsīred. Thĕ ŏbjĕct māy thĕn bē viewed ăt lēisūre bў dĭffūse lĭght, ōr thĕ ĭnstrŭmĕnt māy bē hĕld bĕtwēen thĕ eўe ănd a lămp; ōr, ĭf nēeds bē, ĭt māy bē hĕld bĕtwēen thĕ eўe ănd thĕ sŭn.

Whĕn nŏt ĭn ūse, ĭt slīdes ĭntŏ a cāse thăt ĭs $2.5 \times 1 \times \frac{3}{4}$ ĭnches.

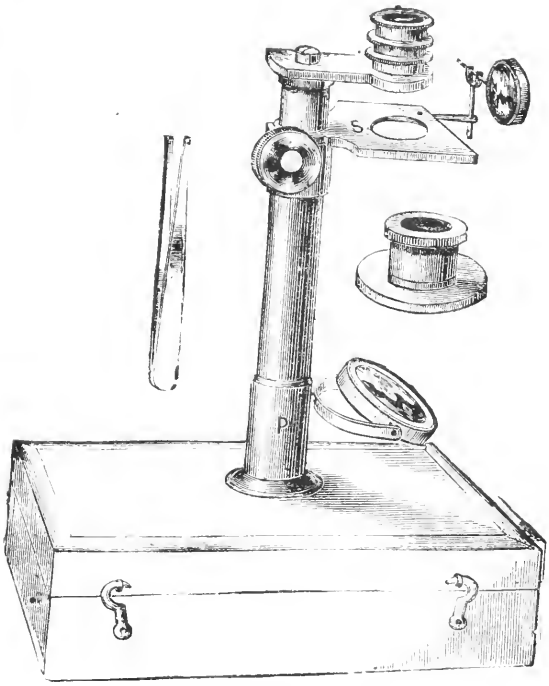
Thĭs lĭttle ĭnstrŭmĕnt ĭs ēvĕn mōre sĕrvĭceable ĭn thĕ stŭdў ŏf ĭnsects thăn ĭn thĕ stŭdў ŏf plănts.



Excelsior Microscope.

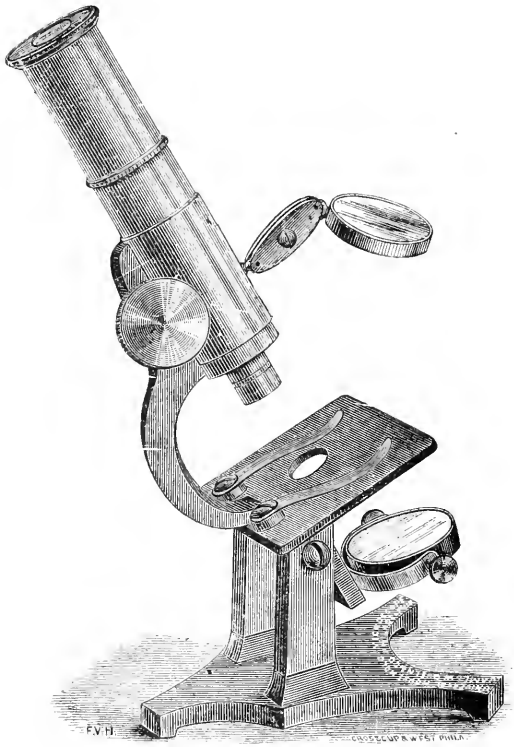
The Excelsior Microscope, with three lenses, is a very convenient thing. It is easy to manage and very efficient; and then it is not cumbersome. Having a movable dissecting stand makes it very serviceable, especially while using it in the field.

This microscope is so constructed that when not in use, it folds together, and is packed away in a wooden case that is the exact size of that shown in the engraving. Hence, without inconvenience, it may be safely carried in the vest pocket.



School Microscope.

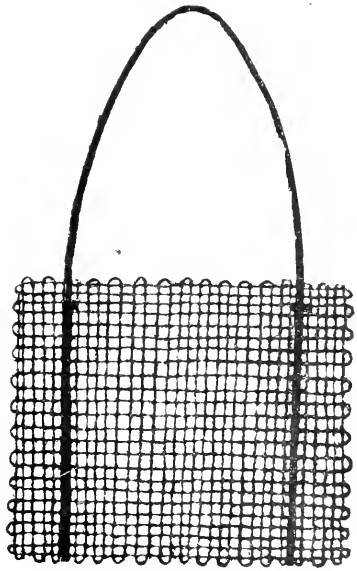
The School Microscope is very serviceable when higher powers are to be used. Indeed, when higher powers are to be used in the field, this is the instrument. When used with compound body, eye-piece and objective, it gives powers from 20 to 100 diameters.



Compound Microscope.

Compound Microscope.—But, aided with any or all of these while in the field, botanic students will meet difficulties in the definition of the organs of plants and in the definition of their structure, that cannot be settled by the aid of any microscope that is usable outside of a well organized laboratory. Microscopes of

hīgh po-wĕr ꞓăn bē ūs̱ed ōnlў ŭndĕr fāvōrȧble çĭrꞓŭmstȧnçĕs̱. In ūs̱ĭṉg ꞇhĕm, ꞇhĕre mŭst bē ȧ fĭrm stĕadў tāble fōr ȧ rĕst fōr ꞇhĕ ĭnstrṳmĕnt, ănd ȧ wĕll rĕḡūlātĕd, sŏft, stĕadў līght. To̤ hăve ꞇhēs̱e ꞓŏnvēm̤ĕnçĕs̱, whīle ŭpŏn ȧ tĕntĭṉg to̤ŭr, ĭs̱ ĭmpŏssīble. Hĕnçe, ꞇhĕ ꞓŏmplīꞓātĕd fōrms ŏf mīꞓrōsꞓōpe mŭst bē lĕft ăt hōme; ănd, whăt dĭffīꞓŭlties̱ ꞓănnŏt bē ōvĕrꞓȯme ĭn ꞇhĕ fiēld, wĭꞇh ꞇhĕ sĭmplĕr fōrms̱, mŭst bē ꞓārefṳllў prēs̱ĕrvĕd ănd trănspōrtĕd to̤ ꞇhĕ wĕll ēquĭppĕd lăbōrȧtōrў.



Drying Case.

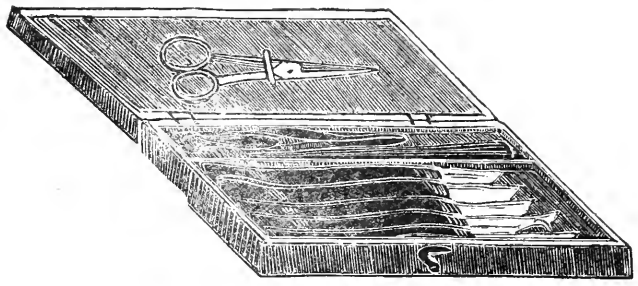
Drying Case.—Thĕ drўĭṉg ꞓāse, ūs̱ed bў

our stūdĕnts, cŏnsĭsts ŏf twŏ pĭēcĕs ŏf sĭeve, sō fāstĕned tŏgĕthĕr bȳ mēans ŏf twŏ străps thăt they māy bē eăsĭly ăptātĕd, ōr sprĕad wīde ōpĕn, ăt will. Thĕ sĭeves ăre ăbout 12x18 inches. Thĕ mĕshĕs ĭn thĕ sĭeve ăre ăbout $\frac{1}{8}$ ŏf ăn ĭnch squāre. The străps ăre ăbout $\frac{3}{4}$ ŏf ăn ĭnch wīde, ănd ăre ārmed wĭth bŭckles, sō thăt thĕ sĭeves eăn bē brŏught tīghtlȳ tŏgĕthĕr ănd mādе sēcūre. They ăre ărrănged nēar thĕ ĕnds ŏf thĕ sĭeves.

Bētwēen thēse sĭeves ăre ărrănged sĕvĕrăl shēets ŏf eālan bĭbūloŭs pāpĕr. Twŏ ōr thrēe quīres ăre nŏt too mŭch. It mŭst bē pĕrfĕctlȳ drȳ, ănd ĕntīrelȳ frēe frŏm mŏth ănd mĭldew. Pāpĕr thăt hăs bēen ŏnce ūsed, mŭst bē mādе pĕrfĕctlȳ drȳ ănd eālan bēfōre ūsĭng ăgāin. A pĭēce ŏf pāpĕr slĭghtlȳ mĭldewed will rŭn thĕ shŏrtĕst plănt. Drȳnĕss ănd eălănlĭnĕss ăre thĕ ĕlēmĕnts ŏf sŭccĕss ĭn thĕ ūse ŏf ă drȳĭng eāse. If thĕ āir ĭs ă lĭttle moist, ĭt ĭs wĕll tŏ pŭt thĕ pāpĕr ĭntŏ ăn ŏvĕn ănd bāke ĭt thŏrōughlȳ bēfōre ūsĭng.

Whīle ĭn thĕ fīēld, ă plănt thăt ĭs tŏ bē prēpāred fŏr thĕ hĕrbārĭŭm, māy bē sprĕad out ŭpŏn ă shēet ŏf bĭbūloŭs pāpĕr, thĕ ōrgăns nēatlȳ ărrănged sō thăt whĕn drȳ they will

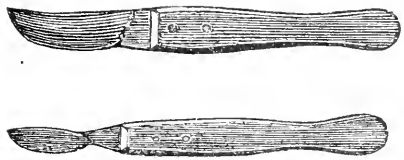
prēsĕnt thĕ ăppēarănçe they should ĭn thĕ hĕrbărĭŭm, ănd thĕn nēatlў cóvĕred wĭth ănóthĕr sheet ŏf pāpĕr ŏf thĕ sāme kĭnd. Thēse twŏ sheets ŏf pāpĕr, wĭth thĕ ĕnclōsed plănt, māy bē plāçed ĭn thĕ drўĭng cāse, ĭn sŭch à wāy, thăt sĭx ōr sĕvĕn sheets ŏf pāpĕr ăre ărrānged smŏothlў ănd sēcūrelў ŭpŏn ēach sīde. Thŭs fĭxed, ĭn ōrdĭnārў wĕathĕr, wĭth prŏpĕr ĕxpōsūre, à plănt wĭll drў ănd cūre cŏmplētelў wĭthout fărthĕr ăttĕnțiŏn. I hăve knōwn our stūdĕnts tŏ sō ărrāngе ănd pĕrfĕctlў prēsĕrve thĭrtў plănts ĭn one drўĭng cāse. Thĕ plănts wĕre găthĕred ănd ărrānged frŏm tīme tŏ tīme ăs they wĕre gōĭng ălŏng, ănd thĕn they wĕre lĕft wĭthout fărthĕr ăttĕnțiŏn, (sāve thăt they wĕre cărefŭl thăt thĕ drўĭng cāse was nŏt ăllowed tŏ gĕt wĕt, ănd thăt ĭt was ĭn ăn āirў plāçe). Indēed, ĭn rēspĕct tŏ thĕ cūrĭng ŏf plănts, mў ădvīçe tŏ mў stūdĕnts ĭs thăt they plāçe thĕ plănts bētwēen à goodlў nŭmbĕr ŏf sheets ŏf pĕrfĕctlў drў pāpĕr, prĕss thĕm wĕll, kēep thĕm ĭn ăn āirў drў plāçe ănd thĕn nĕvĕr ŭndŏ thĕm ŭntĭl rĕadў tŏ ărrăngе thĕm ĭn thĕ hĕrbărĭŭm.



Dissecting Tools.

Dissecting Tools.—Without suitable tools, the student of botany is very tedious, very vexatious, and very fruitless. A few herbaceous plants, with coarse flowers, can be partially dissected with the fingers alone. But, all of the more delicate plants require the use of exquisite tools.

The dissecting tools should be arranged in a neat substantial box of a size and shape convenient for the pocket. Upon the outside of each case, in a conspicuous place, should be engraved the name of the owner. In the case, are scalpels, tenaculums, forceps, needles, scissors, blow tube and jointed hooks.



KNIVES OR SCALPELS.

Knives or Scalpels.—Of the tools used in dissecting plants, a sharp knife of suitable shape is the first in request. The knife that suits me best, is the common scalpel, used by medical students in the study of practical anatomy. The shape of the blade is suitable. The shape of the handle is suitable. The quality of the metal is suitable. It bears a fine edge, keeps sharp well, is easily cleaned, is light to handle, and is very sightly. The blade is so pointed that it is very useful in picking apart the filaments and stigmas of flowers, the turning over of the sepals and petals of flowers, the separating of adherent tissues, &c., &c. Besides, the smooth flat end of the handle is usable for many purposes. With it, without bruising the albumum or liber, the bark is easily separated from the wood, the tunics of bulbs are easily peeled off, the parts of hespiridal readily separated, &c., &c.

Of knīves, there should nŏt bē lĕss than fōur. Nŏt ŭnfrēquĕntlў, bў ăn ăccĭdĕnt, a knīfe ĭs dŭlled. Tọ wŏrk wĭth a dŭll knīfe ĭs līkelў tọ prŏdūce băd rēsŭlts. Tọ shărpĕn a knīfe whīle dĭssĕctĭng a plănt, ĭs līkelў tọ prọve a dĕtrīmĕnt bў lŏss ŏf tīme ănd thĕ dīvĕrsĭon ŏf ăttĕntĭon. If a sūit ŏf knīves ăre ăt hănd, ĭn thĕ cāse one bēcómes dŭll, ĭt māy bē ĕxchānged fŏr ănóthĕr, wĭthout dēlāy ōr ĭnconvēnĭĕnce.

Thĕ knīves should nŏt bē all ŏf one shāpe, nŏr all ŏf one sīze. Thĕ blādes ŏf sóme should bē brŏad, wĭth poĭnts nŏt tọo ăcūte; thōse ŏf sóme shọŭld bē vĕrў nărrōw wĭth ăcūmĭnāte poĭnts. One, ăt lēast, should bē ĕdged ŏn bōth sĭdes. And, fŏr cŭttĭng sŭch thĭngs ăs rēquīre grēat strĕngth, ănd fŏr sĕpărātĭng sŭch pärts ăs rēquīre sóme fōrce, ănd sómetīmes sóme prўĭng, ăs ĭn thĕ cāse ŏf thĕ splĭttĭng ŏf brănchĕs, &c., &c., a strŏng knīfe, mādc bў fōrmĭng a blādc ŭpŏn a sŏlĭd piēce ŏf stēel, ĭs vĕrў ūsefụl.

Tọ dĭssĕct a plănt whōse ōrgăns ăre lārge, sŭch ăs thĕ Arĭsāema trĭphўllŭm, Lĭlĭŭm sūpĕrbŭm, ōr thĕ Cālўcănthŭs flōrĭdŭs, a knīfe wĭth a brŏad blādc ĭs cónvēnĭent. Bŭt, tọ dĭssĕct a smạll plănt, sŭch ăs thĕ Vĕrōnĭca

ŏffĭçĭnȧllĭs, Houstōnĭa çoērulēȧ, ōr the Phlŏx sŭbūlȧtȧ, ȧ tīnў blāde ĭs bĕttĕr ădăptĕd. Indēed, ĭn the cāse ŏf vĕrў small plȧnts, ĭt ĭs nŏt ēasў to gĕt ȧ blāde small ēnoŭgh.

Dissecting Needles.

Needles.—To dĭssĕct ȧ plȧnt, knīves ȧlōne äre nŏt sŭffĭçiĕnt. Thĕ pärts ŏf the ōrgȧns ŏf mănў small plȧnts äre mōre ēasīlў viewed whĕn pĭcked ȧpärt. To pick these mīnūte strŭctūres ȧpärt, nēedles äre wĕll ădăptĕd.

In ōrdĕr thăt ȧ nēedle māy bē ēasīlў hăndled, ăs ȧ dĭssĕctĭng tool, ĭt māy bē fĭxed ĭnto ȧ small round piēçe ŏf wood, ȧbout two ĭnchĕs lŏng. To fĭx ĭt ĭnto the wood, the nēedle should bē clămped ĭnto ȧ vīçe, ĭn sŭch ȧ wāў thăt the eўe-ĕnd prōjĕcts. Upŏn thĭs eўe-ĕnd, plāçe the ĕnd ŏf the stĭck thăt ĭs to sĕrve ăs the hăndle. Thĕn, wĭth ġĕntle blōws ŏf ȧ līght hămmĕr, drīve the wood ŭpŏn the nēedle ŭntĭl the nēedle hăs ĕntĕrĕd the wood, ăt the lēast, hȧlf ŏf ĭts lĕngth. Sō fĭxed, ȧ nēedle ĭs ȧ vĕrў ūseful tool ĭn the dĭssĕcțiȯn ŏf plȧnts.

As the strŭctūre ŏf ōrgȧns vārў ĭn dēgrēe

ŏf fīneněss, ănd ăs̱ mōre fōrçe ĭs̱ rēquīred ĭn pĭckĭṉg ȧpärt sȯme ŏf ŧhēs̱e strŭ€tūres, ĭt ĭs̱ wĕll to̤ hăve nēedles̱ ŏf dĭffĕrĕnt sīzes̱. Fōr ŧhĕ €ōarsĕr strŭ€tūres̱ ȧ nēedle No. 2 ĭs̱ sūitȧble. Fōr ŧhĕ fīnĕst strŭ€tūres̱ No. 10 ĭs̱ sūitȧble. Fōr mēdĭŭm strŭ€tūres̱ No. 5 ănswĕrs̱ vĕrў wĕll.

FORCEPS.

Forceps.—To̤ hōld ănd to̤ hăndle mănў ŏf ŧhĕ tīnў pärts ŏf plȧnts, fōrçĕps äre nēedĕd. Thēs̱e ȧhọuld bē strŏṉg, ănd sō māde ŧhăt, whĕn nŏt ĭn ūse, ŧhĕ blādes̱ sprĭṉg ȧpärt.

Of fōr€ĕps, ŧhēre ȧhọuld bē two̤ pāirs̱. Of ŧhēs̱e, one ȧhọuld hăve vĕrў ȧhärp poȧnts, fōr pĭckĭṉg ŭp ănd hăndlĭṉg vĕrў smạll ŏbjĕ€ts. Thĕ ȯŧhĕr ȧhọuld hăve brŏad blādes̱ ŧhăt äre ēvĕn ŭpŏn ŧhĕ tĕrmĭnȧtĭṉg ĕdġe, fōr fĭrmlў hōldĭṉg dĕlī€āte strŭ€tūres̱ whīle vie-wĭṉg ŧhĕm, ōr whĭle pārĭṉg ŧhĕm wĭŧh ȧ knīfe.

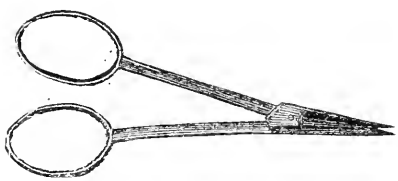
Greāt €āre ȧhọuld ạlwāys̱ bē tākĕn ĭn sēlĕ€tĭṉg fōrçĕps. Thōs̱e wĭŧh ȧhärp poȧnts ȧhọuld bē vĕrў smọoŧh ŭpŏn ŧhĕ €ōăptātĭṉg sŭrfȧçe; ănd ŧhĕ poȧnts ȧhọuld €ȯme to̤ḡĕthĕr wĭŧh ŧhĕ

ŭtmōst prēçĭsiòn. Thōse wĭth brŏad blādes shọuld bē pĕrfĕctlў lĕvĕl ănd smọoth ŭpŏn thęir cōăptātĭng sŭrfàçe, shọuld bē ăccūrātelў lĕvĕl ŭpŏn thĕ frēe sŭrfàçe, ănd shọuld cōăptāte wĭth thĕ ŭtmōst nīçētў. Fōrçĕps thăt dọ nŏt pŏssĕss thēse quàlĭtĭes ăre vĕrў vĕxāțioŭs, ănd ăre thĕ cạuse ŏf vĕrў măny dĭsăppointmĕnts.

Blow Tube.

Blow Tube.—Sòmetīmes whīle dĭssĕctĭng, à họodĕd cŏrŏllà wĭll bēcòme wĭltĕd ănd flăçĭd, ōr cŏllăpsed. Tọ dĭstĕnd ĭt, à cŏnvēnĭĕnt thĭng ĭs à smạll tūbe, bў mēans ŏf whĭch āir căn bē blōwn ĭntọ ĭt.

Thĕ blōw tūbe shọuld bē cŏnĭcàl, vĕrў smạll, nŏt lärgĕr thăn à nŭmbĕr 10 nēedle ăt thĕ lĕssĕr ĕnd, àbout sĭx ĭnchĕs lŏng, ănd mādc ŏf sĭlvĕr.



Scissors.

Scissors.—Fōr clĭppĭng fĭne tĕxtūres, à pāir

ŏf sciss-ōrs ĭs vĕrў ĕffĭcĭent. They should bē shärp pointĕd, ănd kĕpt ĭn pĕrfĕct ōrdĕr.

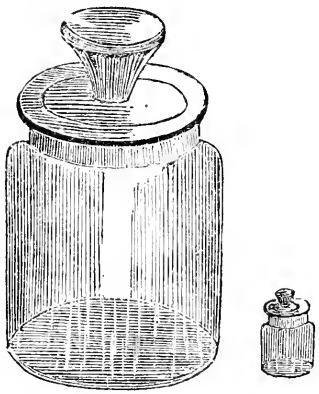
Tenaculum.—A tĕnăcūlŭm ĭs ă ūsefŭl thĭng tŏ teār ŏff thĕ outsīde skĭn ŏf smŏoth toŭgh frŭits, tŏ pĭck ănd teār ăpärt lĕathĕrў tĭssūes, tŏ hook ĭntŏ, ănd lĭft out ŏf spĕcĭmĕn järs, ŏbjĕcts tŏ bē ĕxămĭned, &c., &c.

Jointed Tenacula.

Jointed Tenacula.—Tŏ hōld ŏbjĕcts fäst ŭpŏn thĕ dĭssĕctĭng bōard, ă doŭble tĕnăcūlŭm ĭs vĕrў ūsefŭl. Thĕ doŭble tĕnăcūlŭm ĭs ăn ĭnstrŭmĕnt mādе bў joĭnĭng twŏ hŏoks bў mēans ŏf ă rĭvĕt, ĭn sŭch ă wāy ăs tŏ fōrm ă hĭnge. Thĭs doŭble hŏok ĭs vĕrў cŏnvēnĭent fōr fästĕnĭng ŏbjĕcts tŏ thĕ dĭssĕctĭng bōard whīle dĭssĕctĭng; ōr, fōr hōldĭng bäck ă pīēce ŏf sĕmĭ-dētäched tĭssūe, tŏ gĭve ă bĕttĕr chănce tŏ vĭew ănd dĭssĕct.

Dissecting Board.—Tŏ dĭssĕct ĭn thĕ fĭēld, ă bōard thät wĭll mākе ă kĭnd ŏf tāble ŭpŏn thĕ läp ĭs vĕrў cŏnvēnĭent. Thĭs bōard shŏuld bē 12 ĭnchĕs wĭde ănd 20 ĭnchĕs lŏng. Nēar thĕ cĕntĕr, nēar ŏne ĕnd, ĭt shŏuld bē pĕrfōrātĕd

by̆ two hōles, a half an inch in diāmētĕr, and about fōur inches apärt. Oppōsite to these, in thĕ dirĕction ŏf thĕ lĕngth ŏf thĕ bōard, and about eight inches ŏff, should bē two ŏthĕr hōles, ŏf thĕ sāme dīmĕnsions. Thro these hōles, strĭngs māy pass, to fästĕn sĕcūrely to thĕ dissĕctĭng bōard whatĕvĕr ŏbjĕct is sō ir-rĕgūlär in shāpe, ōr sō slippĕry, as to rēquire sŏme mēans ŏf ättächmĕnt.



Specimen Jars.

Specimen Jars.—Fōr prĕsĕrvĭng in a plump fōrm, thĕ roots, rīzōmes, ĕōrms, bŭlbs, fruits and thĕ mōre ĭmpōrtant pärts ŏf sŭcculĕnt plants, ĭt is nĕcĕssārў to hăve spĕcĭmĕn järs fĭlled wĭth sŏme prēsĕrvĭng fluĭd. Thĕ järs should hăve wīde mouths and ground glass

stŏppĕrs. They should vārў ĭn sīze, frŏm one hōldĭng twọ qūārts, tọ one hōldĭng ăn ounce. Of thĕ lärġĕst sīze, ĭt ĭs nŏt nĕçĕssārў, ăs à rụle, tọ hăve mōre thăn twọ; bŭt, ŏf thĕ ĭntĕrmēdĭāte ănd smạllĕr sīzes, mănў äre ạlwāys ĭn rēquĕst.

Thĕ prēsĕrvĭng lĭqụĭd māy bē dĭlūte ălcŏhŏl, vĭnē gär, vĭnē gär ănd ălcōhŏl, à sōlūṭiòn ŏf chlōrål hўdrāte, sўrŭp, ōr glўçĕrĭne, ăs thĕ nātūre ŏf thĕ sŭbstançe tọ bē prēsĕrved rēquīres. Fōr mōst pŭrpōsĕs, dĭlūte ălcōhŏl ănswĕrs wĕll. Whĕre thĕ cŏlòr ĭs nŏt ŏbjĕcṭiònàble, vĭnē gär ŏften ănswĕrs à gọod pŭrpōse. Mōre frēquĕntlў, thĕ lärġĕr plànt spĕçĭmĕns äre wĕll prēsĕrvĕd ĭn ēqŭål pärts ŏf vĭnē gär ănd dĭlūte ălcōhŏl. Sòme vĕrў dĕlĭcāte pärts ŏf sŭccūlĕnt plànts thăt dọ nŏt kēep wĕll ĭn vĭnē gär ōr ĭn dĭlūte ălcōhŏl, äre kĕpt ĭn gọod cŏndĭṭiòn whĕn ĭmmĕrseđ ĭn sўrŭp, ōr ĭn glўçĕrĭne. Mănў frụits cän bē prēsĕrved ĭn à sōlūṭiòn ŏf chlōrål hўdrāte. Thĕ sōlūṭiòn māy bē mādе bў dĭssŏlvĭng ăn ounce ŏf chlōrål hўdrāte ĭn à pĭnt ŏf wạtĕr. Oftĕn tĭmes à sōlūṭiòn thăt ĭs nŏt hàlf sō rĭch ĭn chlōrål hўdrāte ănswĕrs bĕttĕr. Fōr ĭnsĕcts, one jär should cŏntāin à lĭqụĭd mādе bў dĭssŏlvĭng 10 gr. ŏf ărçĕnĭoŭs

ăçĭd ĭn ȧ pīnt ŏf ălcōhŏl. Into̤ thĭs lĭquĭd thĕ ĭnsĕct shọuld bē ĭmmĕrsed ăs̱ so̤on ăs̱ ca̤ught, ănd lĕft ȧ whīle.

To̤ sēcūre ȧgāinst breākāġe, ḡreāt cāre mŭst a̤lwāys̱ bē tākĕn to̤ kēep thĕ spĕçĭmĕn järs̱ nĭçelў păcked. They shọuld bē ărrānġed ĭn ȧ bŏx, ōr chĕst, wĭth sūitȧble pärtĭṭiȯns̱, ănd sŭrroundĕd wĭth ăn ȧbŭndȧnçe ŏf säw dŭst ōr ȯthĕr păckĭṉg ēquȧllў ăs̱ ḡọod. Bȳ ḡọod ănd zĕaloŭs stūdĕnts, thĕ lŏss ŏf nīçelў prēpāred spĕçīmĕns̱ ĭs̱ nŏt sŭstāined wĭthout mŭch ḡriēf.

ZOOLOGY.

Guns.—To̤ prōsēcūte thĕ stŭdў ŏf Zōŏlōġў, ănīmȧls̱ mŭst bē sēcūred. To̤ sēcūre ănīmȧls̱, sūitȧble ĭmplēmĕnts mŭst bē ūs̱ed. Of thēs̱e ĭmplēmĕnts, ȧ ḡŭn stănds̱ fĭrst ĭn ĭmpōrtȧnçe. To̤ bē ūs̱ed bȳ thĕ zōŏlōgĭst, ŏf ḡŭns̱ thĕre äre two̤ kīnds̱, thĕ shŏt ḡŭn ănd thĕ rīfle.

Thĕ shŏt ḡŭn shọuld bē one thăt cărrĭes̱ fīne shŏt wĕll, ănd one thăt hăs̱ cŏnsĭdĕrȧble ŏf rānġe. Thĕ shŏt shọŭld a̤lwāys̱ bē ăs̱ fīne ăs̱ çĭrcŭmstȧnçĕs̱ wĭll ăllow. An ănīmȧl bădlў măṉḡled bȳ shọotĭṉg, ĭs̱ ȧ po̤or spĕçīmĕn fōr dĭssĕctĭṉg. Howĕvĕr, whĕre thĕ ănīmȧl to̤ bē sēcūred ĭs̱ lärġe, ōr, ĭs̱ sō shȳ thăt one hăs̱ to̤

shoot a great distance, coarser shot must be used.

In many cases, the animal to be secured is very shy and to be killed with ordinary shot, as in the case of hawks, eagles, deer and the like. In these cases, a rifle is needed. Of this gun, the bore should not be too large.

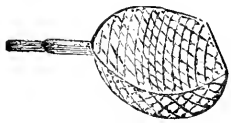
Fish Nets.—To secure fish for study, a suitable net is very essential. One of fine mesh is best for most purposes. To catch the smallest fish, such as minnows and the young of other species, a large meshed net, overlaid on the inside with mosquito bars, answers well.

Hook and Rod.—To secure some species, as the black bass, trout, &c., &c., the hook and rod answers well.

Insect Net.

Insect Net.—To capture insects, a rod armed at one end with a brass hoop, attached to which is a bag made of fine netting, strong cloth, or grass cloth, is very convenient. Of this implement, for ordinary purposes, the rod should be six feet long, and the hoop should

bē about a foot in diameter, and the bag of netting should be about twenty inches deep. But, the beating net, or the net used to capture insects by beating bushes and herbage should be made stouter. It should have a handle about three feet long, the bag should be shallow, and it should be made of strong cloth.



The Water Net.

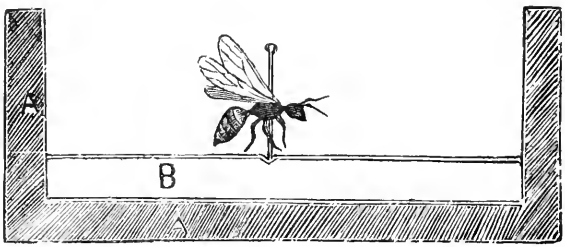
The Water Net. used to capture aquatic insects should have a shallow bag made of grass cloth, or else of strong millinet.

Killers.—To kill insects, a wide mouthed bottle, at the bottom of which is a little cotton saturated with chloroform, ether, benzine or creosote, is well adapted. The cotton should be covered with paper to prevent the insect from becoming entangled in the woody tissue. If creosote is used, the cotton is not necessary. A few drops of creosote, smeared over the bottom of the bottle, is all that is required. In-

dēed, ȧ bŏttle prēpāred wĭth ɛrēōsōte ĭn thĭs wāy ănswĕrs wĕll ăs̱ ȧ ɛătɛhĕr, ăs̱ wĕll ăs̱ ȧ kĭllĕr. Thĕ wīde mouth māy bē tŭrnĕd ōvĕr thĕ ĭnsĕɛt, ănd ăs̱ ĭt ăsçends̱ ĭnto̤ thĕ bŏttle, thĕ stŏppĕr māy bē ĭntrōdūçeđ ŭntĭl thĕ ɛrēatūre ĭs̱ dĕad.

A smạll bĭt ŏf Pōtăssĭɛ çȳănīde, plāçeđ ĭn ȧ bŏttle ănd ɛŏvĕred wĭth ɛŏttŏn, mākes ȧ gọod kĭllĕr. Lärġe spĕçīmĕns̱ māy bē kĭlled bȳ piērçĭṉg thĕm wĭth ȧ pĭn ɛhärġed wĭth ŏxălĭɛ ăçĭd.

Sĭnçe ĭnsĕɛts ŏftĕn ĕsɛāpe whīle ăttĕmptĭṉg to̤ rēmo̤ve thĕm frŏm thĕ nĕt, ĭt ĭs̱ bĕttĕr to̤ kĭll thĕm bēfōre ăttĕmptĭṉg the̱ir rēmo̤vȧl. To̤ do̤ thĭs, plŭnġe thăt pärt ŏf thĕ nĕt ĭn whĭɛh thĕ ĭnsĕɛts äre, ĭnto̤ thĕ kĭllĭṉg bŏttle, plāçe ĭn thĕ stŏppĕr ăs̱ wĕll ăs̱ ɛăn bē, ănd ȧwāit thĕ rēs̱ŭlts. Thĕ wȯrk ŏf dĕath ḡōes̱ ŏn răpĭdlȳ.



Insect Box.

Insect Box.—Sȯme dĕlīɛāte ĭnsĕɛts, ĭf lĕft ĭn

thĕ prēs̱ĕrvĭṉg lĭquĭd, wọuld bē rūĭned bȳ thĕ splăshĭṉg ŏf thĕ flṳĭd, ca̤us̱ed bȳ the mo̤vemĕnt ŏf thĕ vēhĭcle. Sō, to̤ prēs̱ĕrve thĕm frŏm ĭnjūrȳ whīle trăvĕlĭṉg, ȧ sma̤ll bŏx, sāy 3x8x1½ ĭnchĕs̱, līned wĭth cōrk, ĭs vĕry cŏnvēnĭĕnt. An ĭnsĕct thăt ĭs̱ to̤ bē prēsĕrvĕd fōr thĕ căbĭnĕt, māy bē rēmo̤ved frŏm thĕ cūrĭṉg lĭquĭd ĭn thĕ spĕçīmĕn jär, piērçeđ wĭth ȧ pĭn, ănd thĕn sēcūrelȳ fĭxeđ ĭn thĕ ĭnsĕct bŏx bȳ fōrçĭṉg thĕ point ŏf thĕ pĭn ĭnto̤ thĕ cōrk. In thĭs sĭtūāṭiȯn ĭt ĭs̱ sāfe frŏm ĭnjūrȳ, ĭnsĕcts ănd dēcāy.

Boxes for Shells.—Fōr cărrȳĭṉg shĕlls, çĭg̅är bŏxĕs̱ ănswĕr. Bŭt, ōftĕn lärġĕr ănd strŏṉg̅ĕr bŏxĕs̱ ănswĕr bĕttĕr. Bēfōre pŭttĭṉg ĭn thĕ bŏx, ēăch shĕll shọuld bē lābĕlled ănd fōldĕd ĭn pāpĕr.

GEOLOGY.

To̤ prŏsēcūte thĕ stŭdȳ ŏf Gēōlōġȳ, thĕ fiēld stūdĕnt nēeds̱ thĕ to̤ols dēscrībed ŭndĕr thĕ fŏllōwĭṉg hēads̱:

HAMMER.

Hammer.—Thĕ hămmĕr ĭs̱ ăs̱ ĭndĭspĕnsȧble

to the geologist, as it is to the stone mason. To break rocks, to get specimens or mineráls, a hammer weighing about a pound and a half answers well. It should be made with sharp square edges, with its width extending in the direction of the handle. The eye should be large in order that the handle may be strong.

To break large rocks, a sledge of 10 pounds weight is sometimes required. When the rocks to be studied are in great ledges, the means for blasting are sometimes required.

To trim specimens, a hammer weighing about six ounces is suitable. Of this hammer, the faces and edges should be very true.

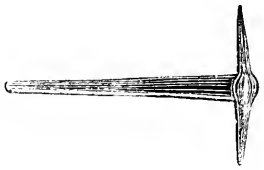
To get fossils, a hammer shaped as those of stone cutters are, is well adapted. It should weigh about four pounds.

Steel Chisel.

Steel Chisel.—For getting fossils, a steel chisel, such as is used by stone cutters, is needed. For ordinary purposes, it should be about six inches long, with an edge about an inch wide. For working out very small speci-

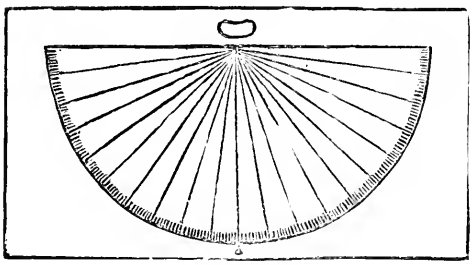
mĕns̱, one nŏt mōre ŧhăn hȧlf ăn ĭneh wīde, ŏftĕn pro̤ves̱ ūs̱efṳl.

Crowbar.—Fōr prȳĭṉg ȧpärt ŧhĕ lāyĕrs̱ ŏf ȧ strātŭm ŏf rŏck, ŧhĕ crōwbär ĭs̱ ūs̱efṳl;—ŏftĕntīmes̱ ĭt ĭs̱ ĭndĭspĕnsȧble. It sho̤uld bē ȧbout fōur fēet lŏng,—ăt one ĕnd māde līke ȧ chĭs̱ĕl, ăt ŧhĕ ŏthĕr, pointĕd, ănd ăs̱ shärp ăs̱ pŏssīble.



Picks.

Pick.—Thĭs ĭnstrūmĕnt ĭs̱ ĭn ḡreāt rēquĕst whĕrĕvĕr strātīfīed rŏck ĭs̱ to̤ bē ĕxămĭned, ănd whĕrĕvĕr bo̤uldĕrs̱ äre to̤ bē ŭnĕarŧheđ.



Clinometer.

Clinometer.—To̤ ăsc̣ĕrtāin ŧhĕ dĭp ŏf rŏck, ŧhĭs ĭs̱ ȧ ūsefṳl ŧhĭṉg. It māy bē māde bȳ

dēsɛrībĭn̲g ȧ sĕmī-çĭrɛle ŭpŏn ȧ bōard ȧbo̤ut 20 ĭnɛhĕs̲ lŏn̲g ănd ȧ fo̤ot wīde, ănd ŧhĕn dīvīdĭn̲g ŧhĕ sĕmī-çĭrɛle ĭnto̤ dēḡrēes̲. Thĕ bōard mŭst bē ȧ rīght ăn̲ḡled părăllĕlōḡrăm, ănd ŧhĕ dīămētĕr ŏf ŧhĕ sĕmī-çĭrɛle mŭst bē părăllĕl to̤ ŧhĕ sīdes̲. Thro̤ ȧ sma̤ll hōle ăt ŧhĕ po̤int ȧbo̤ut whĭɛh ŧhĕ çĭrɛle wạs̲ dēsɛrībed māy bē ĕxtĕndĕd ȧ strĭn̲g ăttăɛhed̄ to̤ ȧ plŭmmĕt.

Whĕn ĭn ūse, ŧhĕ sīde ĭs̲ āpplīed to̤ ŧhĕ sŭrfȧçe ŏf ȧ dĭppĭn̲g rŏck, ănd ŧhĕ dēḡrēes̲ ŏf īnɛlīnāṭiȯn rĕad bȳ ĕxămĭnĭn̲g ŧhĕ pōs̲ĭṭiȯn ŏf ŧhĕ plŭmmĕt ŭpŏn ŧhĕ ḡrădūātĕd sĕmī-çĭrɛle.

Thŭs māde, ŧhĭs bōard ĭs̲ ȧ vĕrȳ ɛhēap, ănd ȧ vĕrȳ ĕffĭçiĕnt ɛlīnŏmētĕr. Bŭt, ŭpŏn ȧ tĕntĭn̲g to̤ur, ĭt sĕrves̲ ȯthĕr pŭrpōsĕs̲ ăs̲ wĕll. It ĭs̲ ŧhĕ prŏpĕr sīze ănd ŧhĕ prŏpĕr shāpe fōr ȧ dĭssĕɛtĭn̲g bōard. And, ăs̲ stūdĕnts ŏf Gēŏlōġȳ äre sȯmetīmes̲ stūdĕnts ŏf Zōŏlōġȳ, ŧhĕ lĭttle bōard sĕrvĕs̲ ȧ two̤ fōld pŭrpōse. Bēsīdes̲, I frēquĕntlȳ sēe ŧhĕ lĭttle bōard ĭn ūse ăs̲ ȧ wrītĭn̲g tāble, ănd ăs̲ ȧ dräwĭn̲g stănd.

Compass.—To̤ ăsçĕrtāin ŧhĕ dīrĕɛṭiȯn ŏf ŧhĕ dĭp ŏf strātȧ, ănd ŧhĕ dīrĕɛṭiȯn ŏf ŧhe strīke ŏf strātȧ, ăs̲ wĕll ăs̲ ŧhĕ ɛărdĭnȧl po̤ints ŏf plāçĕs̲, ŧhe Cŏmpȧss ĭs̲ nēedĕd. Fōr ŧhĭs pŭrpōse, ȧ

gọod pŏ€kĕt €ŏmpȧss ănswĕrs̱ wĕll. (See Cŏmpȧss ȧbȯve.)

Thĕ €līnŏmētĕr wĭth măgnĕtĭ€ nēedle ăttăcheđ, dēs€rībed ŭpŏn pāġe 356 ŏf Dănȧ's̱ New Tĕxt Bọok ŏf Gē ŏlōḡy̆, ĭs̱ ȧ vĕry̆ €ŏmplēte thĭṉg. Wĭth thĭs ĭnstrūmĕnt, bōth thĕ strīke ănd thĕ dĭp ŏf strātȧ äre dētĕrmĭnĕd ăt thĕ sāme tīme.

MAGNET.

Magnet.—Tọ ăsçĕrtāin thĕ kīnd ănd quălĭty̆ ŏf mĕtȧl ĭn ăn ōre, thĕ măḡnĕt ĭs̱ ūsefu̱l. One sō smạll thăt ĭt €ăn bē €ărrĭed ĭn thĕ vĕst pŏckĕt, ănswĕrs̱ wĕll. Evĕn ȧ gọod knīfeblāde, wĕll măḡnĕtīzed, ănswĕrs̱ ạll ōrdĭnāry̆ pŭrpōsĕs̱.

MEASURING TAPE.

Measuring Tape.—An ăc€ūrāte meās̱ūremĕnt ŏf ŏbjĕ€ts ănd ŏf plāçĕs̱ ĭs̱ ŏftĕn vĕry̆ ĭm-

pōrtant. In sŭch cāsĕs, thĕ meāsūrĭng tāpe ĭs vĕrў cŏnvēnĭent. Whĕn ă ccūrācў ĭs ŭnĭmpōrtant, thĕ ăpprŏxĭmāte dĭstance māy bē tāken bў pācĭng, ōr bў thĕ wĭdth ŏf thĕ hănd, ōr thĕ lĕngth ŏf thĕ ärm.

Specimens.—Whĕn spĕcĭmĕns ŏf rŏck ăre cŏllĕctĕd, they should bē drĕssed tŏ à ūnĭfōrm sīze ănd shāpe ăs nēarlў ăs pŏssĭble. In mōst căbĭnĕts, thĕ spĕcĭmĕns ăre about fōur ĭnchĕs lŏng, thrēe ĭnchĕs wīde, ănd ăn ĭnch thĭck. Thĭs ĭs à sīze thăt hăs bēen fŏund vĕrў cŏnvēnĭent. Bŭt, ĭt sŏmetĭmes hăppĕns thăt, ōwĭng tŏ thĕ pē cūlĭărĭtў ŏf thĕ rŏck, ĭts frăgĭlĭtў, &c., &c., ĭt ĭs nŏt pŏssĭble tŏ drĕss thĕ spĕcĭmĕns tŏ thĭs sīze. Thĕn, whătĕvĕr sīze ĭs prăctĭcăl mŭst bē ădŏptĕd.

Thĕ ĕdgĕs ŏf spĕcĭmĕns should bē strāight, thĕ cŏrnĕrs squāre, ănd all pärts ŏf ĭt ăs frēe frŏm hămmĕr märks ăs pŏssĭble. Whĕn cŏnvēnĭent, thĕ spĕcĭmĕn should bē sō drĕssed ăs tŏ shŏw, ŭpŏn one sīde, à wĕathĕred sŭrfăce.

Fossils, whĕn prăctĭcăl, should bē drĕssed ŏut ănd sĕpārātĕd frŏm thĕ rŏck ĭn whĭch they ăre fŏund. Thĭs ĭs dŏne bў mēans ŏf à hămmĕr ănd shärp chĭsĕl. Tŏ sēcūre à pĕrfĕct spĕcĭmĕn, à stĕadў hănd tŏ dīrĕct thĕ chĭsĕl, à

ꞓāreful blōw wĭth the hămmĕr, ănd ȧ wạtchful eȳe äre rēquīred.

Sȯmetīmes ĭt ĭs bĕttĕr nŏt to rēmove the fŏssĭl frŏm the rŏck ĭn whĭch ĭt ĭs found. In thĭs ꞓāse, wĭth ꞓāre, the rŏck should bē drĕssed ŏff ŭntĭl the fŏssĭl stănds ăttăched to the mātrĭx, ŏnlȳ bȳ ȧ pĕdīçĕl.

In frăġīle rŏcks, ĭt ĭs sō ŏftĕn hăzärdoŭs to ăttĕmpt to drĕss out ȧ fŏssĭl. In thăt ꞓāse, thăt pōrṭiȯn ŏf the rŏck thăt ꞓŏntāins the fŏssĭl should bē sēꞓūred ănd hăndled wĭth ꞓāre.

Labeling.—Evĕrȳ spĕçīmĕn, whĕthĕr rŏck ōr fŏssĭl, should, ăt onçe, bē ꞓārefullȳ fōldĕd ŭp ĭn sĕvĕrȧl thĭcknĕssĕs ŏf pāpĕr ănd ꞓārefullȳ lābĕled. Of lābĕls thĕre should bē two,—one ĕnꞓlōsed wĭth the spĕçīmĕn, the ȯthĕr should bē çēmĕntĕd to the wrăppĕr. Thĕ lābĕl should shōw to whạt kīnd ŏf rŏck the spĕçīmĕn bēlŏngs, to whạt ġēōlŏgĭꞓ fōrmāṭiȯn ĭt bēlŏngs, ăt whăt sīte ĭt wạs prōꞓūred, whĕn ĭt wạs prōꞓūred, ănd bȳ whȯm ĭt wạs prōꞓūred. Spĕçīmĕns thăt äre nŏt wĕll lābĕled äre ŏf lĭttle wȯrth. Thĕ hĭstōrȳ ŏf ȧ spĕçīmĕn mākes ĭt vălūȧble. A spĕçīmĕn thăt hăs nŏt ȧ hĭstōrȳ ĭs bŭt lĭttle mōre thăn ȧ ꞓŏmmŏn stōne.

Cement.—Fōr ăttăchĭng lābĕls to rŏcks,

wood, &c., &c., I have not found anything better than that cement that is made by the following formula:

Starch, 2 dr.

White Sugar, 2 oz.

Gum Arabic, 2 oz.

Water enough to make a solution not quite as thick as cream.

Dissolve the gum arabic, add the sugar and starch and boil till the starch is cooked.

This cement was recommended to me by Mr. F. C. Hill, the accomplished and obliging curator of the Geological Museum of the New Jersey College at Princeton, N. J.

To prevent fermentation, I sometimes drop into it a piece of chloral hydrate as big as a hazelnut, or a few drops of carbolic acid. The carbolic acid has the further advantage of repelling insects from eating it after it has been used for cementing purposes.

To mend broken specimens of rocks or fossils, this cement is very valuable. For attaching plants to paper, it is equally valuable. In fact, it is of such general application, that a bottle of it should always form a part of the outfit for the tenting tour.

Packing.—To preserve geological specimens, a stout box and a good supply of strong, but soft paper are required. Each specimen should be neatly wrapped in two thicknesses of clean paper. Around this should be placed two or more thicknesses of spongy paper to secure against bruising. The specimens should then be carefully arranged in a suitable box. In case the box is not filled entirely full with the specimens, paper or other good packing material, should be superimposed until the box is well filled, so as to allow no movement of the specimens. Then the lid should be well secured.

For the want of care in packing geological specimens, many a day's work has been lost, and many a valuable specimen ruined.

SYSTEM.

During a tenting excursion, the most rigid economy of time and health must be practiced. To effect this, every thing must be reduced to

sўstĕm. Evĕrў one mŭst hăve hĭs, ōr hĕr, wŏrk ăssīgned, ănd thĕ tīme ĭn whĭch ĭt ĭs tŏ bē dŏne mŭst bē fĭxed. And, thĕ wŏrk ăssīgned mŭst bē dŏne wĕll, ănd strĭctlў ŏn tīme. Nō lăxĭtў ŏf mănnĕrs ōr mŏrals căn bē ăllowed; ĭndŭlgĕnce ĭnĕvĭtablў hāstĕns tŏ dĭsōrdĕr ănd ĭll hĕalth. Tēachĕrs ănd stūdĕnts māy bē plāyfŭl ănd hūmŏroŭs; bŭt ĭndŭstrў, dĭgnĭtў ănd cĭrcŭmspĕctĭon mŭst, ăt all tīmes, bē rĭgĭdlў prăctĭced.

Eating.—Dūrĭng à tĕntĭng ĕxcŭrsĭon, thĕ ŭtmōst ăttĕntĭon mŭst bē gĭvĕn tŏ sўstĕm ĭn ēatĭng. Almōst alwāys, thĕ ăppētīte bēcomes vōrācioŭs. Thĭs crāvĭng ŏf thĕ stōmach ĭs ĭndūced bў thĕ ĕxtrà dēmănd fŏr fŏod ărĭsĭng frŏm thĕ ĕxtrà àmount ŏf cŏnsŭmptĭon ŏf tĭssūe ĭn pĕrfŏrmĭng thĕ grēăt àmount ŏf wŏrk bŏth ŏf bŏdў ănd ŏf mĭnd, ăssīgned tŏ ēach ĭndĭvĭdūàl. Hĕnce, thĭs dēmănd mŭst bē sătĭsfĭed. A lărge àmount ŏf gŏod, whŏlesŏme fŏod mŭst bē ēatĕn. Bŭt, ĭt mŭst bē ēatĕn ăt stātĕd tīmes ănd ŭndĕr prŏpĕr ĭnfluĕncĕs.

Times for Victualing.—Thĕ āim should bē tŏ ēat ăt sĭx, twĕlve ănd sĕvĕn ō'clŏck. Vĭctuàlĭng ăt thēse hours dĭvĭdes thĕ dāy cĕcōnŏmĭcàllў, ăs wĕll fŏr thĕ tēam ăs fŏr thĕ stūdĕnt,

Thĭs brĭngs brĕakfăst ăs ĕarlў ăs ĭs prăctĭcal ănd cŏnsĭstĕnt wĭth hĕalth; ănd sŭppĕr ăs lāte ăs ĭs beārable dūrĭng thĕ ăftĕrnoon; ănd yĕt ĭt ĭs ăs ĕarlў ăs ĭs cŏmfōrtable dūrĭng thĕ nĭght.

Bĕtwēen thēse mēals, thĕre mŭst bē ăllowed nō lŭnchĭng—nō crŭnchĭng ŏf cănđĭes ōr of crăckĕrs, ŏf fruit ōr ŏf swēet mēats; nō sĭppĭng ŏf prēsĕrves, ōr ĭce crēam. Sŭch brēach ŏf phўsĭŏlŏgĭc ląw ĭs sūre tọ ĕngĕndĕr gāstrĭc dĭsōrdĕr. Thĕn fŏllōw hĕadāche ănd ąll thăt trāin ŏf mĭsērĭes thăt ărĭse frŏm à dērāngĕd cŏndĭtiọn ŏf thĕ dĭgĕstĭve ăppărātŭs.

Whīle tĕntĭng, thĕ bŏdў should bē kĕpt ĭn pĕrfĕct hĕalth; fōr thĕn, ănd ŏnlў thĕn, ĭs thĕ hĕad clēar, ănd thĕ mĭnd fĭt tọ sŭrvey, ănd cŏntĕmplāte, thōse thĭngs whĭch ĭt ĭs thĕ busĭnĕss ŏf thĕ stūdĕnt tọ stŭdў. Whīle tĕntĭng, thĕ slĭghtĕst ĭndŭlgĕnce ĭs sūre tọ brēed dērāngemĕnt ŏf sŏme pärt ōr pärts ŏf thĕ sўstĕm. Indēed, ĭt dŏes sō ăt ąll tĭmes ănd ănў whĕre. Bŭt, ŭpŏn à tĕntĭng ĕxcŭrsiọn, sŭch dērāngemĕnt ănd ĭts cŏnsēquĕnces shōw mōre plāinlў. And thĕn, tọo, thĕ mĭsĕrĭes cŏnsēquĕnt ŭpŏn ĭrrĕgŭlărĭtĭes ăre lĕss ănnoўĭng ăt hōme. At hōme thĕ dēbąuch căn crąwl àwāy ănd sŭffĕr hĭs gāstrălgĭă, ōr hĭs hĕadāche, à lĭttle out ŏf

sight, and a little out of the hearing of such as are more virtuous; but, while tenting, the debauch becomes an intolerable nuisance. He must be with the party,—there is no other place for him. And, even if he is sufficiently reserved and circumspect to say nothing about his suffering, his hand upon his head, or his fist upon his stomach, or the said swoll upon his face, tells only too plainly of his misery. Such a one renders himself a condemnate nuisance to the entire party. His miseries have a depressing influence upon all; their effects cannot be evaded. Even if his fellow students do not have him to nurse, or are not obliged to hear his complaints, his distorted visage casts a gloom over all.

Let no one think that a little indulgence will do no harm. A single cracker, a single bite of cocoanut, or two pea nuts, eaten between breakfast and dinner, is sufficient to spoil an afternoon's intellection, and engender the most frightful dreams during the night.

The more active the mind, the more strenuousness in diet is required. The inactive mind can eat from morning till night with but little inconvenience. With him, indigestion and di-

gĕsţiòn, ȧlŏng wĭth ȧbout ēlĕvĕn hours ŏf slēep, cŏnstĭtūte ȧlmōst thĕ ĕntīre rounds ŏf lĭfe. Indēed, thĕ lĕss brāin thĕ mōre stŏmăch, ĭs thĕ rūle. And, they who ăppрēçĭāte lĕss thĕ beaūtĭes ŏf nātūre, ăppрēçĭāte mōre thĕ lŭsçioŭsnĕss ănd flāvŏr ŏf what they ēat. Indēed, ȧbout ȧll sŏme fōlks gĕt out ŏf lĭfe ĭs what gōes ĭntọ their stŏmăchs. And, ăs ăn ăctĭve mĭndĕd pĕrsŏn ĕnjoys thĕ çēaselĕss sŭrvey ŏf thĕ ŏbjĕcts ŏf nātūre, sō thĕ shăllōw mĭndĕd ōr brāin-dēgĕnĕrāte ĕnjoy thĕ cŏnstănt crŭnchĭng ănd swăllōwĭng ŏf fọod. And yĕt, fōr hĭs prăctĭçe, whọ can blāme hĭm? If thĭs ĭs ȧll hē hăs ȧ căpăçĭtў tọ ĕnjoy, whў nŏt gĭve hĭs ŭndĭvĭdĕd ăttĕnţiòn tọ thĭs kĭnd ŏf ĕnjoymĕnt? Whў nŏt hăve ĭt sō ărrănged thăt thĕ mouth ĭs nĕvĕr ĕmptў, ănd thĕ pălāte ĭs ȧlwāys tĭckled ōr sọothed wĭth sāvōrs ănd flāvōrs?

Whạtĕvĕr ȧ măn hăs ȧ căpăçĭtў tọ ĕnjoy, thăt lĕt hĭm ĕnjoy. Bēcąuse, hē can ĕnjoy ōnlў thăt fōr whĭch hē hăs ȧ căpăçĭtў. It ĭs ăs ĭmpŏssĭble fōr ȧ cŏnstănt fēdĕr, ȧ brāin-dēgĕnērāte, ȧ stŏmăch-măn, tọ ăppрēçĭāte thĕ beaūtĭes ŏf ȧ lănds-cāpe, ŏf ȧ sŭnsĕt, ōr ŏf ȧ rāinbōw; ōr thĕ sŭblĭmĭtў ŏf lŏftў mountaĭns, ăs ĭt ĭs tọ tāke ȧ phōtōgrāph ŭpŏn ȧ păn-cāke. And

why? Fōr ŧhĭs sĭmple rēasȯn: As̱ ŧhĕ ōrḡȧnīzāṭiȯn ŏf ŧhĕ păn ɛāke ĭs̱ nŏt sūitĕd tọ rētāin ŧhĕ phōtōḡrăphĭɛ ĭmprĕssịȯn, ēvĕn whĕn ŧhĕ ĭmāġe ĭs̱ māde ŭpŏn ĭt, sō ŧhĕ brāin ŏf ŧhĕ stŏmăɛh-măn ĭs̱ nŏt sō ōrḡȧnīzed ăs̱ tọ fĭx, rētāin ănd ăpprēçĭāte ŧhĕ ĭmprĕssịȯns̱ ŏf beaūtĭfụl ŏbjĕɛts, ēvĕn ĭf hĭs̱ ɛămērȧ, ŧhĕ eȳe, ĭs̱ fōɛŭseđ ŭpŏn ŧhĕm. Thăt whĭɛh wē ɛạll ŧhĕ beaūtĭfụl dȯes̱ nŏt ĕxĭst ĭn hĭs̱ wȯrld. Hĕ tākes̱ nō ɛŏḡnīzȧnçe ŏf ĭt,—hē ɛȧnnŏt. Hē ĭs̱ nŏt ōrḡȧnīzed fōr ĭt.

In hĭs̱ dēvĕlŏpmĕnt, ŧhōs̱e pärts ŏf ŧhĕ brāin whōs̱e ŏffĭçe ĭt ĭs̱ tọ pĕrfōrm ŧhĕ fŭnɛṭiȯns̱ ŧhăt wē ɛạll rēas̱ȯn, rēflĕɛṭiȯn ănd çŏnstrŭɛṭiȯn dēġĕnĕrātĕd, whīle ŧhōs̱e pärts ŧhăt hăve tọ dọ wĭŧh fēelĭṉg, wĭŧh ēatĭṉg ănd drĭnkĭṉg, ănd wĭŧh tāstĭṉg ănd smĕllĭṉg, dēvĕlŏpeđ tọ ĕxçĕss. Hĕnçe ĭt ĭs̱ ŧhăt "ēat" ĭs̱ ŧhĕ bus̱īnĕss wĭŧh hĭm. And hĕnçe ĭt ĭs̱, ēatĭṉg ănd ĭndōlĕnçe äre ạll ŧhăt hē vălūes̱ ĭn līfe, ănd ạll hē hăs̱ ȧ dēs̱īre tọ ăttāin.

In rĕfĕrĕnçe tọ ŧhĭs sŭbjĕɛt, ŧhĭs făɛt shọuld bē kĕpt ĭn view. Thĕ tȳpe măn, the fōrmātĭve măn, wạs sȳmmĕtrĭɛȧl. Nēiŧhĕr hĭs̱ ĭntĕllĕɛtūȧl, nōr hĭs̱ sĕnsūȧl, făɛŭltìes̱ prēdŏmĭnāted. Tĕmpĕrāte ĭn ạll ŧhĭṉgs̱, hē ăpprēçĭātĕd ănd

ĕnjoẏed thĕ beaūtĭfụl, thĕ eūphōnĭe, thĕ frā-grant, thē rĕlĭshfụl ănd thĕ eūpăthĭe. Hē sŭf-fĕred,—bŭt tọ hĭm, hĭs tăsk waṣ nŏt ŏnĕroŭs; hē ĕnjoẏed,—bŭt hĭs frụĭtĭon dĭd nŏt ĕngĕndĕr ĕestăçẏ. Vĭrtūoŭs,—hē mĕt whạt waṣ bēfōre hĭm wĭth fōrtĭtūde. Brāve,—hē trĭŭmphed ĭn ĕvĕrẏ strŭg-gle fōr rĭght. Frŏm bĭrth tĭll dĕath, ạll waṣ sătĭsfăetōrẏ, āll waṣ ĕnjoẏable.

If wē äre dĭffĕrĕnt, ĭf our făeŭltĭeṣ dọ nŏt ăeeōrd wĭth thōṣe ŏf tẏpăl măn, ĭf wē äre nŏt eūdēmŏnĭe, thĕ fạult ĭṣ ēithĕr, wĭth ourselveṣ, ōr wĭth our pārĕnts. If, bōrn wĭth sẏmmĕtrĭeăl pärts, ănd wĭth symmĕtrĭeal făeŭltĭeṣ, wē hăve nĕglĕeted tọ prăetĭçe thōṣe vĭrtūeṣ whĭeh ălōne eăn maintāin ăn eqụĭlĭbrĭŭm ŏf thĕ hū-măn sẏstĕm, wē hăve dēgĕnĕrātĕd bẏ our ōwn fạult. If our părĕnts, out ōf a wạnt ŏf vĭrtūe, hăve dēgĕnĕrātĕd ĭn prōereātĭon, theẏ hăve ĕn-tāiled theĭr dēgĕnĕrāçẏ ŭpŏn ŭs. Fōr thĭs dē-gĕnĕrāçẏ, wē äre nŏt rēspŏnsĭble. Bŭt, wē shọuld ĕvĕr kēep ĭn mĭnd, thăt whĭle ĭt ĭṣ nŏt eaṣẏ fōr thōṣe whọ hăve lŏst sẏmmĕtrẏ, ēithĕr ŏf bŏdẏ ōr ŏf mĭnd, tọ ĕvĕr rēgāin ĭt, ĭt ĭṣ equīte eaṣẏ, bẏ nĕglĕet, ōr vĭçĭoŭs prăetĭçēṣ tọ māke thĕ ŭnsẏmmĕtrĭeăl dēgĕnĕrāte tọ thĕ mōst ăb-jĕet dēgrēe eōnsĭstĕnt wĭth hūmăn ĕxĭstĕnçe.

Hĕnçe, ēaeh one should bē çĭrcŭmspĕct, ănd ĕvĕr ăctĭve ĭn prăctĭçĭnḡ whatĕvĕr ŏf ḡood māy bē ăllŏttĕd tọ hĭm ; hōpĭnḡ thăt ĭn thĭs wāy, ēvĕn ĭf hē dọes nŏt sō mŭch ĭmprọve ăs tọ rēach thĕ ăvĕrāḡe lĕvĕl, hē māy, ăt thĕ lēast, māintāin, thrọ lĭfe, ăn ăvĕrāḡe ăs ḡọod ăs thăt wĭth whĭch hē bēḡăn. Bēcąusę, nĕḡlĕctĭnḡ vĭrtūe, hē răpĭdlў dēḡĕnĕrātes ănd thĕ rānḡe ŏf hĭs ĕnjọymĕnts ĭs lĕssĕned. Evĕn thĕ wĕll bălànçeđ, stọopĭnḡ tọ thĕ vīçĕs ŏf ĭntĕmpĕrànçe, ĭrrēḡūlär ănd ĭmmŏdĕrāte ēatĭnḡ, thĕ ūsę ŏf ălcōhŏl, tēa, cŏffēe, tōbăccō ănd kĭndrĕd thĭnḡs, sọon dēvĕlŏps à mōrbĭd cŏndĭtiọn ŏf thĕ dĭḡĕstĭve ăppărātŭs. Hўpĕrtrōphў, ōr ătrōphў ŏf thĕ stŏmăch ănd bowĕls fŏllōws, whīle thĕ brāin lōsĕs ĭts sўmmĕtrў. Dūrĭnḡ thĭs rĕtrōḡrāde mĕtāmōrphōsĭs, thōsę pärts ŏf thĕ brāin, thĕ ăctĭọn ŏf whĭch hăve tọ dọ wĭth vĭrtūe, fōr à wănt ŏf ĕxĕrçīse, bēḡĭn ătrōphў, whīle thōsę pärts thăt sūpĕrĭntĕnd thĕ sĕnsūàl făcŭltĭes, bēĭnḡ ōvĕr ĕxĕrçīsed, bēḡĭn hўpĕrtrōphў. In thĭs wāy, hē whọ wąs à brāin măn dēḡĕnĕrātes ĭntọ à stŏmăch măn.

In thĕ cāse ŏf thĕ stŏmăch măn, hĭs ĭntĕllĕctiọn ĭs māinlў rēflĕx. Hē hăs nŏt thĕ cāpăçĭtў fōr rēasọn, rĕflĕctiọn ōr cŏnstrŭctiọn,

Whĕn hē lọoks ŭpŏn ăn ŏbjĕct, ĭf ĭt ĭs sūĭtĕd tọ hĭs cāpăcĭtў, ĭt dọes nŏt stärt ĭn hĭm ȧ trāin ŏf thŏught thăt lēads hĭm tọ ȧ cŏntĕmplāṭiọn ŏf thĕ Authŏr, ănd ĭts ădăptāṭiọn tọ ĭts plāçe ĭn thĕ ēcŏnōmў ŏf thĕ ūnĭvĕrse; bŭt, ŏn thĕ cŏntrārў, ĭt dīrĕctlў awākĕns hĭs ăppētīte ănd hē prēpāres tọ ēat. Hē dọes nŏt cŏnsĭdĕr whĕthĕr ĭt ĭs prụdĕnt fōr hĭm tọ ēat, ōr whĕthĕr ĭt ĭs ȧ sūĭtȧble tīme fōr hĭm tọ ēat. In cāse ĭt ĭs ȧ lŭscịoŭs frụit, ĭt brĭngs thĕ wạtĕr tọ hĭs mouth; ănd ĭn cāse ĭt ĭs nŏt qụīte wĭthĭn hĭs rēach, hĭs eỵe bēgĭns tọ spärkle ănd hĭs ŭndĕr jạw bēgĭns tọ mànēuvĕr ēre thĕ ŏbjĕct ĭs wĭthĭn hĭs grăsp.

Now, thĕre ĭs nō ūse fōr thĕ cŏnstĭtūĕnts ŏf thĭs ēat-lŏvĭng clàss tọ gō tĕntĭng. Sŭch hăd bĕttĕr gō ĭntọ ȧ răspbĕrrў pătch, ȧ pēach ōrchärd, ȧ bāke shŏp, ōr ăn oỵstĕr sālọon; sọmewhĕre whĕre thĕre ĭs plĕntў tọ ēat, ănd thăt plĕnty ạlwāys rĕadў tọ bē ēatĕn; ănd whĕre thĕre ĭs nŏthĭng tọ lēad thĕm tọ thĭnk. Sŭch mĕn ăre mādе mĭsĕrȧble ĭf cŏmpĕlled tọ thĭnk. It ĭs nŏt ĭn their līne ŏf bŭsĭnĕss; they ăre nŏt ūsed tọ ĭt, ănd ĭt hŭrts thĕm. In făct, ĭf sŭch mĕn wạnt tọ thĭnk, thăt ĭs, ĭf they wĭsh tọ fŏllōw ọut sọme trāin ŏf rēasọnĭng ăs mĕn dọ who

lĭve vĭrtŭoŭslў, they can nŏt do ĭt. They hăve nŏt thĕ ōrgănīzāțiŏn tŏ dŏ ĭt. Bēfōre sŭch mĕn can ĕnjoy thĕ cāpăcĭtў tŏ thĭnk, they hăve tŏ bē trănsfōrmed bў thĕ ŏbsĕrvănce ŏf thĕ mōst rĭgĭd dīētĕtĭc lạws. Evĕn tŏ thĭnk ĭn à fēeble wāy, mŏnths, ănd yēars, ŏf thĕ mōst rĭgĭd ŏbsĕrvănce ŏf thĕ lạws ŏf dīĕt ăre rēqụīred tŏ brĭng ăbŏut thĕ rēqụīsĭte trănsfōrmāțiŏn ŏf brāin ănd dīgĕstĭve ăppărātŭs. Indēed, bētwēen thĕ rĕflĕx măn, thĕ stŏmăch măn, ănd thĕ rēflĕctĭve măn, thĕ brāin măn, thĕre ĭs à grēāt, à wīde ĕxpănse, sō bēstrewn wĭth pălătable thĭngs, ănd ăttrăctĭve ăttīre, ănd ĭndūcemĕnts tŏ ĭdlenĕss ănd ĭndōlĕnce, thăt thĕ rēflĕx măn ạlmōst nĕvĕr crŏssĕs ōvĕr tŏ thĕ rēflĕctĭve. Sō nēar ĭmpŏssĭble ĭs ĭt fōr thĕ rēflĕx pĕrsŏn tŏ pàss ōvĕr tŏ thĕ rēflĕctĭve, fōr thĕ stŏmăch măn tŏ bē trănsfōrmed ĭntŏ thĕ brāin măn, that I hăve thŏught à mōre frụitlĕss ĕndĕavōr cănnŏt bē mādc thăn thĕ ăttĕmpt tŏ ĕlēvāte, bў ĕdūcāțiŏn, à rēflĕx, ăn ạll-ēat ănd ăn ạll-plāy, à stŏmăch pūpĭl, tŏ thĕ grāde ŏf à rēflĕctĭve, à brāin pūpĭl. In mў ĕxpērĭĕnce ĭn tēaching, ĕxtĕndĭng ōvĕr à spāce ŏf 25 yēars, ĕvĕrў ĕndĕavōr, ạlthō I hăve mādc mănў, hăs prōvĕn ābōrtĭve.

In prōpōrṭiȯn ăs thĕ rēflĕctĭve stūdĕnt ĭndŭlgĕs ĭn thĕ prăctĭçĕs pēcūlĭär tȯ thĕ rēflex pĕrsȯn, ĭn thăt prōpōrṭiȯn hē cŭltīvātes stŏmăch dēvĕlŏpmĕnt ănd stŏmăch dērāngĕmĕnt, dēbauchĕs thĕ ĕntīre ēcȯnōmў ŏf hĭs sўstĕm ănd ĭndūçĕs thōse stūpĭd phāsĕs ŏf lĭfe chărăctĕrĭstĭc ŏf thĕ vĭçiȯŭs, ănd dēsçĕnds tōwärds thĕ stŏmăch măn. Lĕt ĕvĕrў ȯne bēwāre. Thĕre ĭs nō mĭdwāy. Bētwēen vĭrtūe ănd vĭçe thĕre ĭs nō grādāṭiȯn. Whĕn ȯne çēasĕs tȯ prăctĭçe thōse vĭrtūes chărăctĕrĭstĭc ŏf thĕ tўpe măn, hē ăt ȯnçe dēsçĕnds tȯ thĕ vĭçiȯŭs, thĕ dēgĕnĕrāte măn. Hȯwĕvĕr, ŏf thĕ vĭçiȯŭs, ŏf dēgĕnĕrāte mĕn, thĕre ärе mănў grādes.

Division of Labor.—Each stūdĕnt mŭst hăve ăssīgned tȯ hĭm thĕ pärt ŏf thĕ wȯrk thăt hē ĭs ĕxpĕctĕd tȯ pĕrfōrm. Thĕ wȯrk ŏf cāriŋg fōr thĕ tēam, ŏf āidĭŋg ĭn prēpārĭŋg fōr vĭctuālĭŋg, ŏf lōadĭŋg ănd ŭnlōadĭŋg thĕ vēhĭcle, ŏf pŭttĭŋg ŭp ănd tākĭŋg dȯwn thĕ tĕnts, &c., &c., mŭst bē nĭçelў ăppōrṭiȯned. Tȯ cărrў ȯut thĕ pärt ăssīgned, ĭn tīme ănd ĭn prŏpĕr ōrdĕr, mŭst bē rēgärdĕd ăbsōlūte. Thĕ fāilūre ŏf ȯne stūdĕnt dērăngĕs thĕ wȯrk ŏf all, ănd ĭnĕvĭtablў causes dēlāys ănd dĭsăppȯintmĕnts. Sō, ĭndōlĕnçe, ōr dĭsōbēdĭĕnçe, cănnŏt bē tŏlĕr-

ātĕd. If ŧhĕre bē ȧ stūdĕnt ŧhăt wĭlfŭllў dȯes̱ nŏt pĕrfōrm hĭs̱ pärt wĕll, ĭt ĭs̱ bĕttĕr, ăt ȯnçe, to̤ lābĕl hĭm prŏpĕrlў ănd pŭt hĭm ȧbōard ŧhĕ ɛärs̱ ănd ȧhĭp hĭm hōme. Sŭɛh ȧ stūdĕnt ĭs̱ to̤o ḡrāve ȧ nūiṣȧnçe to̤ bē tŏlĕrātĕd ŭpŏn ȧ tĕntĭṉg ĕxɛŭrṣiȯn. Hĭs̱ fāilūres̱ so̤on ɛŏmprōmīse ŧhĕ wĕlfāre ŏf a̤ll.

Clothing.—Thĕ ɛlōŧhĭṉg wōrn whīle tĕntĭṉg ȧhọuld nŏt bē to̤o ĕxpĕnsĭve, nōr to̤o ȧhōwў. Plāin sŭbstănṭiȧl ɛlōŧhĭṉg ănswĕrs̱ bĕst. Thĕre ȧhọuld bē ēnọugh ŏf ĭt; ănd yĕt, nŏt mănў ɛhāṉġĕs̱ äre nēedĕd. Stūdĕnts whīle tĕntĭṉg äre nŏt ĕxpĕɛtĕd to̤ bē ŏn drĕss părāde. Thōs̱e who̤ sēe ŧhĕm, ĕxpĕɛt ŧhĕm to̤ bē drĕssed fōr wȯrk. Anў ŧhĭṉg ŧhăt ȧ stūdĕnt fēars̱ to̤ hăve soiled, hăd bĕttĕr bē lĕft ăt hōme. Sȯmetīmes̱ mīnes̱ äre to̤ bē ĕntĕred, ănd ŧhĕ drĭppĭṉg wa̤tĕr ĭs̱ nŏt a̤lwāys̱ ɛlēan. Sȯmetīmes̱ ɛŏpsĕs̱ äre to̤ bē trăversed, ănd ŧhĕ bŭȧhĕs̱ äre hărd ŭpŏn ŧhĭn sṳits. Sȯmetīmes̱ märȧhĕs̱ äre to̤ bē ĕxămĭned, ănd ŧhĕ mŭd ĭs̱ līȧble to̤ spŏt ănd soil. Sȯmetīmes̱ ŧhĕ rŏckў ĕsɛärpmĕnts ŏf hĭlls̱ ănd mountaĭns̱ äre to̤ bē ɛlīmbed, ănd ŧhĕ rŏcks, stōnes̱ ănd dĭrt weār hărd ŏn fīne mātĕrĭȧl. Sȯmetīmes̱ foundrĭes̱ äre to̤ bē vĭsĭtĕd, ănd ŧhĕ flўĭṉg spärks ŏf mŏltĕn mĕtȧl quĭcklў

bŭrn ĭnto̤ ŧhĕ ɛlōŧhĭn̲g wōrn bȳ ŧhĕ vĭsĭtōr. Sȯmetīmes̲ ŧhĕ slāte făɛtōrȳ, ōr ŧhĕ stōne plānĭn̲g mĭll, ĭs̲ to̤ bē ĕxămĭned, ănd ŧhĕ splăshĭn̲g sprāy ŧhăt sȯmtīmes̲ a̤lmōst fĭlls̲ ŧhĕ ro̤om, ĭs̲ nŏt ĕntīrelȳ ɛlēan.

To̤ bē sūre, ŧhĕ drĕss wōrn whĕn do̤ĭn̲g sŭɛh wȯrk, nēed nŏt bē ŧhĕ sāme ăs̲ ŧhĕ one wŏrn whĕn sŭrve̤yĭn̲g Lŏn̲g Brănɛh, ōr ŧhĕ Cĕntrȧl Pärk. Yĕt, ăt a̤lmōst a̤ll tīmes̲, ŧhĕ tĕntĭn̲g stūdĕnt hăd bĕttĕr bē sō drĕssed ŧhăt hē ĭs̲ rĕadȳ fōr ēmĕrġĕnçĭes̲.

Shoes.—Thĕ sho̤es wōrn whīle tĕntĭn̲g dēmănd ĕspĕçiȧl ăttĕnṭiȯn. Mŭɛh wa̤lkĭn̲g mŭst a̤lwāys̲ bē dȯne. Hĕnçe, ḡo̤od ēas̲ȳ sho̤es äre vĕrȳ ĕssĕnṭiȧl. Thōs̲e māde ŏf ɛȧlf skĭn, wĭŧh wīde bŏttȯms̲, ănd sŭbstănṭiȧl sōles̲, äre ŧhĕ bĕst to̤ wa̤lk ĭn,—ĕspĕçiȧllȳ whĕn ŧhĕ ḡround ĭs̲ ŭnēvĕn, ōr ŧhĕ sŭrfāçe ĭs̲ stōnȳ. To̤ weār whĕn ĭt ĭs̲ wĕt, ōr when vĭsĭtĭn̲g wĕt plāçĕs̲, fōr bōtănĭɛ pŭrpōsĕs̲, ȧ pāir ŏf rŭbbĕr bo̤ots äre ĕxçĕllĕnt.

Nō stūdĕnt sho̤uld stärt frŏm hōme wĭŧh ăn ŭnbrōkĕn pāir ŏf new sho̤es. In sō dōĭn̲g, ŧhĕre äre to̤o mănȳ līȧbĭlītĭes̲ to̤ sōre fēet frŏm rŭbbĭn̲g. And, ȧ sōre fo̤ot whīle tĕntĭn̲g, nĕxt to̤ ăn ĭrrĕḡūlȧr ēatĕr, ĭs̲ ŧhĕ wŏrst pĕst ŧhăt

can afflict a party. The aim should be to keep the feet dry and comfortable. For, unless the feet are kept right, the head will be wrong. Cramped, pinched feet, and an aching head, wet feet and a sore throat, cold feet and a chilly back, usually go together. Just one student, suffering either of these maladies, is enough to mar the spirits of the whole party.

In cool, or, in changeable weather, overcoats and shawls are essential. Each one should be provided with suitable extras. Comfort and protection should never be lost sight of.

Early Rising is essential to success as well while tenting as while prosecuting any other branch of business. An hour before ten o'clock, A. M., to the student, is worth any two hours after that time. In the morning the mind is clear, the system refreshed and vigorous, the air salubrious and the rays of the sun more invigorating. The morning is the time for the student,—whether tenting or at home. Indeed, it is the time for anybody that wishes to live above pauperism.

Retiring.—In order that students may rise early, it is important that they should retire early. In summer, it is well for the tenter to

rētīre ăs soon ăs thĕ shādes ŏf nīght hăve fŭllў fallĕn.

Punctuality, ĭn fīne, ĭn ĕvĕrў ăppoĭntmĕnt, ĭs thĕ ĕlēmĕnt thăt mākes thĕ tēntĭng stūdĕnt ăgrēeàble ănd pŏpūlăr, ănd ĭnsūres sŭccĕss.

THE TENTING SCHOOL.

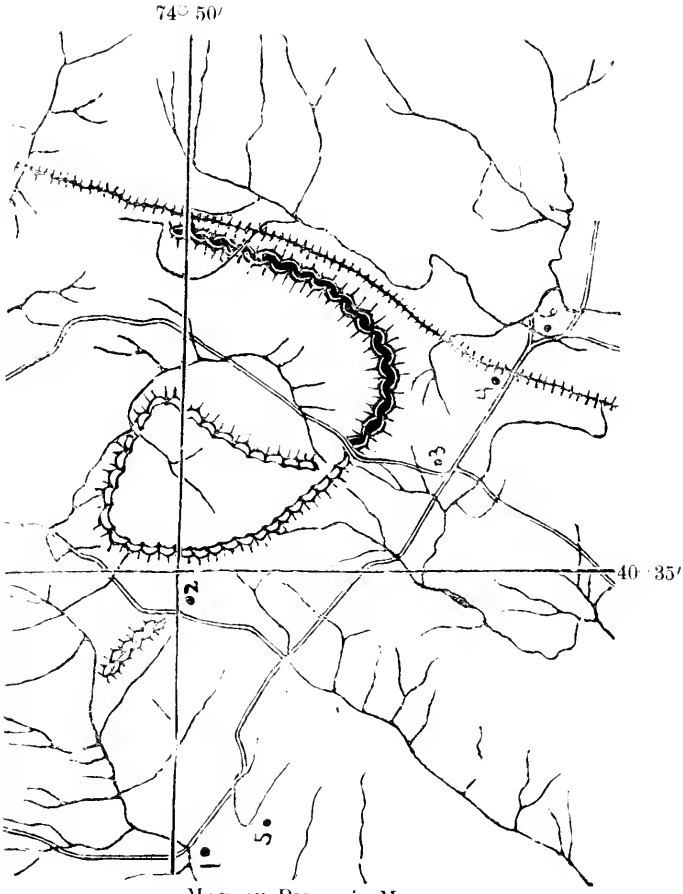
TRIP TO PICKLE'S MOUNTAIN.

Thĕ wēarў mărĭnĕr wĕndĭng hĭs wątĕrў wāy tọ thĕ pōrt ŏf New Yōrk, ănxĭoŭslў sŭrvęys thĕ wĕstĕrn hōrĭzŏn. Evĕnĭng ădvănçĕs ănd thĕ shādes ŏf nĭght lōwĕr; ănd ăs hē mākes hĭs lăst ŏbsĕrvāțiọn ŏf thĕ wĕstĕrn prŏspĕct, ăt thĕ ŭtmōst lĭmĭt ŏf vĭsțọn, thĕ skў ănd ōçeăn sēem tọ mēet. Nŏt à mountaĭn ōr towĕr ĭs sēen tọ rēlĭēve thĕ drēarў sāmenĕss ŏf thĕ ĭntĕrmĭnable plāin.

Thĕ mōrnĭng dąwns. Anxĭoŭslў hē seănş thĕ wĕstĕrn hōrĭzọn. Fär àwāy ĭn thĕ dĭm mātĭn ăzūre ŭpŏn thĕ vĕrў ĕŏnfĭnes ŏf thĕ drēarў plāin, hē dēserĭes ăn ŏbjĕct lĭghtĕd ŭp bў thĕ rĕd ŏf mōrnĭng. As hē ḡāzĕs, thĕ ŏbjĕct brĭghtĕns. And, ăs thĕ ḡrāy ŏf mōrnĭng mĕrġĕs ĭntọ thĕ lĭght ŏf dāy, thĕ lăndseāpe ĭs

rēliēved ŏf ĭts tīresȯme sāmenĕss bȳ ŧhĕ ăppēarȧnçe ŏf ȧ sĭngle gēōgrăphĭc fōrm. Wĭŧh hĭs̱ ḡlȧss, hē mōre ꞓlōselў sꞓăns̱ ŧhĕ new ăppărĭṭiȯn. Its outlīnes̱ äre bōld; ĭts fōrm ĭs̱ ḡrāçefụl; frŏm ȧ bāse ĭt rīs̱ĕs̱ līke ȧ ꞓōne; ĭt ĭs̱ ꞓȯvĕred wĭŧh fŏrĕst; ĭt ĭs̱ Pĭckle's̱ Mountaĭn,—ŧhĕ fĭrst lānd vĭsīble tọ ŧhĕ mărĭnĕr ăs̱ hē ăpprōaꞓhĕs̱ New Yōrk Härbȯr.

Whĕre ŧhĕ mĕrĭdĭȧn ŏf 74° 47′ wĕst ŏf Grēenwĭꞓh ꞓrŏssĕs̱ ŧhĕ părăllĕl ŏf 40° 47′ nŏrŧh lătītūde, rīsĕs̱ ŭp ŧhăt bōld ĕmīnĕnçe knōwn ăs̱ Pĭckle's̱ Mountaĭn. Alŧhō ăn ĕmĭnĕnçe ŏf mŏdĕst prōpōrṭiȯns̱ ănd tāme outlīnes̱, ĭt mākes ȧ bōld ănd ăn ăttrăꞓtĭve fĭḡūre ĭn ŧhĕ lăndsꞓāpe ŏf Cĕntrȧl New Jĕrsēy. In ăltītūde, ĭt sŭrpȧssĕs̱ ănў ȯthĕr ĕlēvāṭiȯn souŧh ŏf ŧhĕ Mŭsꞓŏnĕtꞓŏṉg Mountaĭn. Viewed frŏm ănў pärt ŏf ŧhĕ Rĕdshāle Vălḻey, ĭt ĭs̱ ŧhĕ lŏftĭĕst ănd ŧhĕ mōst ḡrāçefụl ĕmĭnĕnçe ĭn ŧhĕ prŏspĕꞓt. It ĭs̱ ŧhăt pärt ŏf ŧhĕ Amĕrīꞓȧn Cŏntīnĕnt fĭrst sēen bȳ ŧhĕ mărĭnĕr ăs̱ hē nēars̱ ŧhăt ĭnbreākĭṉg ŏf ŧhĕ Atlăntĭꞓ knōwn ăs̱ ŧhĕ Lōwĕr Bāy. In Hŭntĕrdȯn Countў, ĭt ĭs̱ ŧhĕ ĕmĭnĕnçe fĭrst līghtĕd ŭp bȳ ŧhĕ rĕd ŏf mōrnĭṉg, ănd ŧhĕ lȧst tọ shĕd ŧhĕ ḡlĭmmĕrĭṉg rāys̱ ŏf ŧhĕ sĕttĭṉg sŭn.



Map of Pickle's Mountain.

1. Bärlĕy Shĕaf.
2. Stănton.
3. Serăbbletown.
4. White House Stăţion.
5. Plĕasant Rŭn.
6. White House.

Pĭckle's̱ Mountaĭn ĭs̱ nŏt ăn ĭsōlātĕd ĕmĭnĕnçe. It ĭs̱ one—ŧhĕ lŏftĭĕst ănd ŧhĕ mōst ēastĕrlў, ŏf ŧhĕ ŧhrēe ĕmĭnĕnçĕs̱ ŧhăt rīs̱ĕ frŏm ăn ĭrrĕḡūlȧr ⱫrĕsçĕntĭⱫ swĕll knōwn ăs̱ Lŏṉg Rĭdġe. Thĭs rĭdġe ănd ŧhĕ ŧhrēe ĕmĭnĕnçĕs̱ ŧhăt rīse frŏm ĭt äre ŧhŭs dēsⱫrībed ĭn ŧhĕ PhўsĭⱫȧl Gēŏḡrȧphў ănd Gēŏlōġў ŏf Hŭntĕrdȯn ănd Sȯmĕrsĕt Counties̱, pŭblĭsheđ bȳ Evĕrĕtt & Cō., 1881:

To̤ ŧhĕ ēast ŏf ŧhĕ tāble lănd [ŏf Hŭntĕrdȯn Cō., N. J.] ănd sĕpārātĕd frŏm ĭt bȳ ŧhĕ Soŭŧh BrănⱫh ŏf ŧhĕ Rărītȧn Rĭvĕr, ĭs̱ ăn ĕlēvāṭiȯn, a̤lmōst ⱫrĕsçĕntĭⱫ ĭn fōrm, ŧhăt rīs̱ĕs̱ ŭp ăbrŭptlў frŏm ŧhĕ Ⱬŏntĭḡūoŭs plāin to̤ ŧhĕ heīght ĭn one plāçe, ŏf sĕvĕn hŭndrĕd ănd sĭxtў-sĕvĕn fēet. Thĭs ĭs̱ knōwn ăs̱ Lŏṉg Rĭdġe. Thĭs rĭdġe, a̤lŧhō Ⱬŏntĭnūoŭs, ĭs̱ ūsūȧllў dēsⱫrībed ăs̱ Ⱬŏnsĭstĭṉg ŏf ŧhrēe pärts. Thĕ mōst wĕstĕrlў ŏf ŧhēs̱e pärts ĭs̱ knōwn ăs̱ Round Mountaĭn. Thĭs ĭs̱ ăn ĕmĭnĕnçe ŧhăt swĕlls̱ ŭp frŏm ŧhĕ māin rĭdġe ĭn ȧ fōrm mŭⱫh rēs̱ĕmblĭṉg ȧ ṣūḡär lōaf. Its ăltītūde ȧbȯve ŧhĕ sēa lĕvĕl ĭs̱ fīve hŭndrĕd ănd sĕvĕntў-fīve fēet. Its slōpes äre ḡĕntle, bŭt ŧhĕ tŏp ănd sīdes̱ ŏf ĭt äre bēstrewed wĭŧh bōwldĕrs̱ tō sŭⱫh ăn ĕxtĕnt ŧhăt ĭt ĭs̱ nŏt tĭllȧble. Hĕnçe, ŧhĕ mōst ĕlēvātĕd

pärt ŏf ĭt ĭs cŏvĕred wĭth a fŏrĕst ŏf härd wood, ănd ĭs nŏt mŭch frequĕntĕd. Vălūelĕss ăs ĭt ĭs ĭn point ŏf ăgrĭcŭltūre, ĭn thĕ lănd-scāpe ŏf thĕ nŏrthēastĕrn pärt ŏf Hŭntĕrdŏn Countў, ĭt fŏrms a spŏt ŏf beaūtў. Its grāçeful slōpes ănd sўmmĕtrĭcal cŭrves, ăs viewed frŏm thĕ Sourland Rĭdge ănd thĕ cŏntĭgūoŭs plāin, hăve dēlĭghtĕd thĕ eўes ŏf mănў a lŏvĕr ŏf thĕ beaŭtĭful. Its rōbe ŏf snōwў whīte ĭn wĭntĕr, ŏf vĕrdant hūe ĭn sŭmmĕr, ănd ĭts vărĭoŭs cŏlŏrs ĭn aut ŭmn, lĭt ŭp bў thĕ glēam ŏf mōrnĭng, prēsĕnt to thĕ eўes ŏf thĕ lŏvĕr ŏf nātūre a spĕcĭăle alwāys ăttrăctĭve, ănd mŭch ădmīred.

"Thĕ nŏrthēastĕrn pärt ŏf thĕ crĕsçĕntĭc rĭdge ĭs sŏmewhăt cŏmplīcātĕd. It cŏnsĭsts ŏf thrēe pärts. Thĕ southwĕstĕrn pärt ĭs brŏad ănd bōld. It hăs ăn ăltĭtūde ŏf sĭx hŭndrĕd ănd sĕvĕntў-fĭve fēet. Tōwärds thĕ wĕst ĭts sŭrfāçe slōpes ŏft gĕntlў, ănd thĕ soil ĭs tĭllable. Tōwärds thĕ ēast, thĕ slōpe ĭs vĕrў stēep ănd rŏckў. It ĭs fŏrĕst clăd. Thĭs pärt ĭs lōcallў knōwn ăs thĕ Cŭshētŏng Mountaĭn.

"Thĕ nŏrthēastĕrn pärt cŏnsĭsts ŏf a shärp rĭdge wĭth stēep slōpes thăt ăre bĕstrewed wĭth rŏcks ănd cŏvĕred, fŏr thĕ mōst pärt, wĭth a

fŏrĕst ŏf härd wo̤od. Upŏn ŧhĭs rĭdġe äre sĕvĕrȧl pēaks ōr ĕmĭnĕnçĕs̱ whĭeh ḡĭve ĭt ŧhĕ ăppēarȧnçe ŏf ȧ sïĕrrȧ. Thĭs pärt ŏf ŧhĕ rĭdġe ĭs̱ knōwn ăs̱ Pĭckle's̱ Mountaĭn.

Bētwēen ŧhĕ nōrŧhēastĕrn ănd ŧhĕ souŧhwĕstĕrn pärts—ŧhăt ĭs̱, bētwēen ŧhĕ Cṳshētŏṉg ănd Pĭckle's̱ Mountaĭn—ĭs̱ ȧ ŧhĭrd pärt, ŧhăt bēars̱ ȧ rēlāṭiȯn to̤ ŧhĕ ȯŧhĕr two̤ pōrṭiȯns̱ sȯmewhạt sĭmīlȧr to̤ ŧhĕ rēlāṭiȯn ŧhăt ŧhĕ tōe ŏf ȧ hōrseshoe beārs̱ to̤ ŧhĕ pärts ĭt sĕrves̱ to̤ eŏnnĕet. Thĭs ĭs̱ ŧhĕ mōst souŧhēastĕrlў pärt ŏf ŧhĭs mountaĭn. It ĭs̱ a̤lsō ŧhĕ lēast ĕlēvātĕd ănd ŧhĕ mōst ăeçĕssīble. Mŭeh ŏf ĭt ĭs̱ ărȧble ănd ŭndĕr ḡo̤od tĭllāge."

Pĭckle's̱ Mountaĭn ĭs̱ ȧ mĭnĭȧtūre sïĕrrȧ. Its erĕst, ăt ĭrrĕḡūlȧr dĭstȧnçĕs̱, rīs̱ĕs̱ ŭp ĭnto̤ shärp ĕmĭnĕnçĕs̱, ḡĭvĭṉg ĭt sȯmewhạt ŧhĕ ăppēarȧnçe, whĕn viewed frŏm ŧhĕ ădjāçĕnt plāin, ŏf ăn ĭnvĕrtĕd sa̤w. Its slōpes äre a̤lmōst ēquȧl ănd vĕrў stēep. Its erĕst ĭs̱ shärp ănd sō nărrōw ĭn mănў plāçĕs̱ ŧhăt ŧhĕre ĭs̱ bārelў ro̤om fōr ȧ păŧh fōr pēople wa̤lkĭṉg sĭṉgle fīle. In trĕnd, ĭt ĭs̱ sȯmewhạt erĕsçĕntĭe,—ŧhĕ erĕsçĕnt ĕxtĕndĭṉg a̤lmōst nōrŧhwĕst ănd souŧhēast. It ĭs̱ ȧbout ŧhrēe mīles̱ lŏṉg, ănd ăt ĭts eŭlmĕn,

ĭt swĕlls̱ frŏm ŧhĕ plāin ŭpŏn whĭch ĭt rĕsts to̤ ŧhĕ heīght ŏf 587 fēet.

Thĭs mountaĭn cŏnsĭsts ŏf ȧ cōre fōrmed ŏf ŧhăt pēcūlĭȧr kīnd ŏf rŏck knōwn to̤ ġēŏlōġĭsts ăs̱ trăchīte, ănd ŏf ȧ săndy̆ ōr ḡrĭtty̆ soil ŧhăt hăs̱ rēsŭltĕd frŏm ŧhĕ dĭsĭntĕḡrāṭiȯn ŏf ŧhĕ ŭndĕrly̆ĭṉg rŏck. Upŏn ŧhĕ crĕst, ăt vārĭoŭs points, ŧhĕ cōre rŏck māy bē sēen ĭn plāçe. Upŏn ŧhĕ sŭrfȧçe, ōr ŭpŏn ŧhōs̱e pärts ŧhăt äre ĕxpōs̱ed to̤ ŧhĕ wĕaŧhĕr, ĭt ĭs̱ whīte ōr ȧ dĭrty̆ līght ḡrāy. It ĭs̱ vĕry̆ fīne ḡrāined ănd vĕry̆ toŭgh. Undĕr ŧhĕ hămmĕr, ĭt ĭs̱ brōkĕn wĭŧh ḡreāt dĭffīcŭlty̆, sō mŭch sō ŧhăt ŧhĭs rŏck ĭs̱ nĕvĕr drĕssed fōr buĭldĭṉg stōne. Yĕt, ŭndĕr clīmătĭc ĭnflṳĕnçĕs̱, ĭt rĕadĭly̆ dĭsĭntĕḡrātes, ănd mōuldĕrs̱ ĭnto̤ ȧ vĕry̆ ărȧble soil.

Thĕ slōpes ŏf ŧhĭs mountaĭn, ĭn măny̆ plāçĕs̱, äre ŧhĭckly̆ bēstrewn wĭŧh bōuldĕrs̱, ŧhĕ dēnūdĕd frăḡmĕnts ŏf ŧhĕ trăchĭtĭc cōre rŏck ŧhăt hăve nŏt yĕt ĕntīrely̆ yiēldĕd to̤ ŧhĕ dĭsĭntĕḡrātĭṉg ĭnflṳĕnçe ŏf ŧhĕ ătmōsphēre. In shāpe ŧhēs̱e frăḡmĕnts äre quȧdrīlătĕrȧl. Unlīke ŧhĕ sŭrfȧçe bōuldĕrs̱ ŏf băssȧlt, ŧhe̱y pĕrsĭstĕntly̆ māintāin ŧhĕ ăṉgūlȧr fōrm. Evĕn whĕn ŭndĕr clīmătĭc ĭnflṳĕnçĕs̱, ŧhe̱y hăve bēen rēdūçed to̤ pärtĭcles̱, ŧhe̱y pĕrsĭst ĭn prēsĕntĭṉg ăṉgūlărĭ-

ties. Hence, the harsh and gritty character of the soil that forms the crest and slopes of this mountain.

The soil of this elevation is very retentive of moisture. As narrow as the ridge is, and as steep as are its slopes, vegetation upon it grows luxuriantly and seldomly suffers from drought. During the severe drought of August, September and October of 1881,—the severest that has scourged our country in the memory of the oldest man,—the plants, herbs, bushes, shrubs and trees that grew here seemed to be less affected by the dry weather than those that grew upon the most favored sites upon the neighboring plain.

The plain around this mountain is a part of the basin of the Raritan. Accordingly its soil is a shaly loam. Geologically speaking, it is a soil that results from the decomposition of the underlying redshale. Its surface is undulating or knolly. In some directions, it stretches away from the base of the mountain as far as one can see. In other directions, it is skirted by graceful ridges or pictures-que hills. It is well watered, very fertile, divided into large farms and is in good tilth. Scat-

tĕred ōvĕr ĭt, hēre ănd thĕre, äre thrīvĭng towns ănd beaūtīfŭl vĭllăgĕs.

To Pĭckle's Mountaĭn, ŭpŏn thĕ mōrnĭng ŏf thĕ 31st ŏf Māy, thĕ Stūdĕnts ănd Tēachĕrs ŏf thĕ Acădēmў ŏf Scĭĕnce ănd Art sĕt out. Thĕ dāy was fāir. Thĕ skў was clēar ănd thĕ āir sălūbrĭoŭs. Thĕ stūdĕnts wĕre chēerfŭl ănd ăttĕntĭve, ănd all thĭngs trănspīred prŏfĭtablў ănd plĕasăntlў.

Thĕ pärtў nŭmbĕred sĭxtēen.

THE PUPILS WERE

JENNIE S. DILTS,	RINGOS,	N. J.
ORVILLE DILTS,	"	"
BEN LARISON,	"	"
POLLY LARISON,	"	"
SARAH E. LARUE,	"	"
PETER S. MOORE,	"	"
GEORGE C. PRALL,	"	"
JOHN W. QUICK,	"	"
MARY B. RUDEBACK,	COPPER HILL.	
MABELLE WILLIAMSON,	RINGOS,	N. J.
WILHELMINA WILLIAMSON,	"	"

THE TEACHERS WERE

MARY J. LARISON,	"	"
C. W. LARISON,	"	"
MARY W. PRALL,	"	"
SARAH A. PRALL,	"	"

THE DRIVER WAS
GEORGE T. DALRYMPLE, - RINGOS, N. J.

On our way we passed thro Flemington and the Barley Sheaf. As an excerise in the use of geographic instruments was a part of the work of the day, before going to the mountain, we visited that cosy little village called White House Station, on the N. J. Central R. R., in order to make some observations preparatory to measuring the height of the mountain and that of the hills within sight.

During the day, the instruments mainly in use, were the Aneroid barometer, the thermometer, and the clinometer. At the White House Station, the railroad track is 180.7 feet above mean tide. The altitude of this site may be regarded the mean of the plain for a long way around. Accordingly, at this point, we began our observations. The aneroid barometer was carefully noted by all. The aspect of the mountain carefully noted. The objects upon the contiguous plain carefully surveyed.

This work being done, we started toward the highest part of the mountain. In the carry-all, we rode to the foot of the elevation,

Hēre wē dĭsmountĕd, sĕnt thĕ cărrў-all to thăt sīte ōvĕr whĭch thĕ rōad frŏm Scrăbbletown to Lĕbȧnŏn pȧssĕs, dĭstrĭbūtĕd our tools ănd our ūtĕnsĭls, ănd bēgăn thĕ ăsçĕnt. At fĭrst, thĕ slōpe ĭs ġĕntle; bŭt, ăs wē ădvȧnçe, thĕ slōpe ĭs mōre ĭnclīned. Nēar thĕ foot ŏf thĕ ĕlēvāṭiȯn ĭssūe strŏng sprĭngs ŏf thĕ pūrĕst ănd sŏftĕst watĕr. Knōwĭng thĕ tĕndĕnçў to thĭrst ĭn clīmbĭng prēçĭpītoŭs ĕlēvāṭiȯns, ănd ăntĭçīpātĭng thĕ dĭffĭcŭltў ŏf gĕttĭng watĕr ŭntĭl wē āgāin dēsçĕndĕd thĕ mountaĭn, ăt thēse fountaĭns wē drănk dēeplў.

Slōwlў ănd dēlĭbĕrātelў wē ăsçĕnd. Thĕ slōpe ĭs stēep. Thĕ clīnŏmētĕr tĕlls ŭs thăt thĕ mountaĭn sīde ĭnclīnes sō ăs to māke wĭth ȧ pĕrpĕndĭcūlȧr, ăn angle ŏf 70°. Thĕ bărŏmētĕr tĕlls ŭs wē hăve ăsçĕndĕd 200 fēet. Bў thĕ thĕrmŏmētĕr, wē sēe thăt thĕ āir ăt thĕ plāçe ăt whĭch wē äre, ĭs almōst one dēgrēe lōwĕr thăn ĭt was ĭn thĕ plāin.

Agāin wē ăsçĕnd, tĭll all äre tīrĕd. Upŏn bouldĕrs ănd prŏstrāte lŏgs, wē äre sēatĕd fōr ănȯthĕr ŏbsĕrvāṭiȯn, ănd ănȯthĕr sōçiȧl ĭntĕrchānġe ŏf thŏught. Bў thĕ bărŏmētĕr, wē sēe wē hăve ăsçĕndĕd ănȯthĕr 200 fēet. Bў thĕ clīnŏmētĕr, wē sēe thăt ăt thĭs sīte, thĕ slōpe ĭs

ēvĕn stēepĕr thăn ăt thĕ ŏbsĕrvĭng plāçe bēlōw. Hēre thĕ ĭnclīnāțiŏn ĭs about 60°. On ĭnspĕcțiŏn ŏf thĕ thĕrmŏmētĕr, wē lĕarn thăt thĕ āir hēre ĭs cooler bȳ 2° thăn ĭt was ŭpŏn thĕ plāin.

Agāin, wē ăsçĕnd, tĭll wē rēach thĕ cŭlmĕn. Thĕ fēăt ĭs ăccŏmplĭshed. Hēre wē rĕst. Fāçĕs äre rĕd, eȳes äre spärklĭng, brows äre sŭffūsed wĭth swĕat. Thĕ shāde ĭs dēep, thĕre äre plĕntȳ ŏf good sēats ănd thĕ gĕntle brēeze ĭs cool ănd rēfrĕshĭng. Wĭt ĭs rīfe ănd hūmor ĭs frēelȳ flōwĭng.

An ĭnspĕcțiŏn ŏf thĕ bărŏmētĕr tēaches ŭs thăt wē hăve ăsçĕndĕd 587 fēet ăbŏve thĕ R. R. trăck ăt thĕ White House Stāțiŏn. Sĭnçe thĕ R. R. trăck ăt thăt plāçe ĭs 180 fēet ăbŏve mēan tīde, thĕ sŭm ŏf thēse two nŭmbĕrs wĭll bē thĕ nŭmbĕr ŏf fēet thĕ cŭlmĕn ĭs ăbŏve mēan tīde. Hĕnçe wē cŏmpūte thăt thĕ ăltĭtūde ŏf thĕ hĭll ĭs 767 fēet ăbŏve thĕ lĕvĕl ŏf thĕ sēa.

Bȳ ăn ĭnspĕcțiŏn ŏf thĕ thĕrmŏmētĕr, wē sēe thăt thĕ tĕmpĕrătūre ŏf thĕ āir ăt thĕ cŭlmĕn ĭs 3° lōwĕr thăn ĭt was ŭpŏn thĕ plāin. Hēre wē hăve dĕmŏnstrātĕd thăt făct, sō wĕll knōwn to all whō äre ūsed to mountaĭnēerĭng, thăt thĕ tĕmpĕrătūre ŏf thĕ āir ŭpŏn clēvāțiŏns

ĭs lōwĕr thăn thăt ŏf thĕ ătmŏsphēre ŭpŏn ădjoinĭng plāins.

Thĕ cŭlmĕn ŏf thĭs mountaĭn cŏnsĭsts ŏf à knŏb ŏf trăchīte thăt prōjĕcts ŭp frŏm thĕ cōre-rŏck ŏf thĕ rĭdge. Tōwards thĕ S. E. thĭs knŏb prēsĕnts ăn ĕscărpmĕnt thăt ĭs prēcĭpĭtoŭs. At thĕ foot ŏf thĭs ĕscărpmĕnt ĭs à lărge pīle ŏf blŏcks ŏf sŭrfàce trăchīte, ăs rĕgūlàr ĭn cŏntour ăs ĭf drĕssed bȳ sŏme dĕft māsŏn. Thēse ăngūlàr blŏcks ăre sō whīte, ŭpŏn thĕ wĕathĕrĕd sŭrfàcĕs, thăt they ăppēar ăs ĭf cōatĕd wĭth whītewash, ōr călcĭmīne. Thĭs cŏlōr, howĕvĕr, ĭs pēculĭàr tŏ the wĕathĕrĕd sŭrfàce ŏf thĕ trăchīte ŏf thĭs rēgĭon.

Tōwards thĕ N. W. thĕ cŭlmĕn rŏck grădūăllȳ slōpes àwāy ănd ĭs sō dēeplȳ cŏvĕrĕd wĭth thĕ grĭttȳ soil thăt ōvĕr ĭt grōws à lŭxurĭànt fŏrĕst. Nōr lĕss lŭxurĭànt ăre thĕ trēes ŏf thĕ fŏrĕst ŭpŏn thĕ ŏppōsīte sīdes ŏf thĕ crĕst.

As thĕ cŭlmĕn ĭs sŭrroundĕd bȳ à dĕnse wŏods, ĭt ĭs ăn ŭnfāvōràble sīte fŏr viewĭng dĭstànt ŏbjĕcts. Bŭt, tōwards thĕ south, ăt thĕ dĭstànce ŏf à quărtĕr ŏf à mīle, ĭs ăn ōpĕn ārēà thăt cŏmmănds à view ŏf à lărge cĭrcuĭt ŏf cŏuntrȳ. Tŏ thĭs wē dēsçĕndĕd. Hēre, bȳ mēans ŏf our ĭnstrŭmĕnts, wē mādc sŭch ŏb-

sĕrvāṭiȯns̱ ăs̱ wĕre rēquīred to̤ ăsçĕrtāin ŧhĕ ăltītūde ŏf ŧhĕ plāçe, ŧhĕ tĕmpĕrȧtūre ŏf ŧhĕ ătmŏsphēre, ŧhĕ mĕrĭdĭȧn ŏf ŧhĕ plāçe ănd ĭts rēlāṭiȯn to̤ ne̱ighbōrĭṉg ŏbjĕɛts.

Thĕ ăltītūde ŏf ŧhĭs ōpĕn ārēȧ ĭs̱ ȧbout 95 fēet lĕss ŧhăn ŧhăt ŏf ŧhĕ ɛŭlmĕn ŏf ŧhĕ mountaĭn. Whĕn wē hăd lĕarned ŧhĭs făɛt, wē poised our ɛlīnŏmētĕr to̤ ɛŏmpāre ŧhĕ ăltītūde ŏf ŧhĭs sīte wĭŧh ŧhăt ŏf ŧhĕ ne̱ighbōrĭṉg hĭlls̱. As̱ ŧhĕ ĭns̱trṳmĕnt wạs̱ tŭrned ŧhro̤ ŧhĕ çĭrɛūit ŏf ŧhĕ hŏrīzŏn, wē lĕarned ŧhăt our sĭtūāṭiȯn, ĕxçĕptĭṉg ŧhĕ Cṳshētŏṉg, wạs̱ hīghĕr ŧhăn ŧhăt ŏf ănў ĕlēvāṭiȯn ĭn view. Bŭt, ăs̱ ŧhĕ ĭnstrṳmĕnt wạs̱ dīrĕɛtĕd tōward ŧhĕ Cṳshētŏṉg, ĭt wạs̱ ŏbsĕrved ŧhăt ŧhe sīte ĕxăɛtlў 95 fēet bēlōw ŧhĕ ɛŭlmĕn ŏf Pĭckle's̱ Mountaĭn, wạs̱ jŭst lĕvĕl wĭŧh ŧhĕ ɛŭlmĕn ŏf Cṳshētŏṉg. Thŭs wē lĕarned ŧhăt ŧhĕ ăltītūde ŏf Cṳshētŏṉg ĭs̱ 672 fēet ȧbȯve ŧhĕ lĕvĕl ŏf ŧhĕ sēa.

Frŏm ŧhĭs ɛlēared ārēȧ, ŧhĕ prŏspĕɛt ĭs̱ ḡrănd. As̱ wē fāçe ŧhĕ ēast, ŧhĕ eȳe trāçĕs̱ ŧhĕ ḡrāçefṳl outlīnes̱ ŏf Fĭrst ănd Sĕɛȯnd Mountaĭns̱. The̱y äre ȧbout tĕn mīles̱ ȧwāy. Rīs̱ĭṉg bōldlў ōvĕr ȧgāinst ŭs, to̤ ŧhĕ heīght ŏf 400 fēet, ŧhe̱y ḡrāçefṳllў trĕnd nōrŧhēast ănd souŧhwĕst, fōrmĭṉg mōst beaūtĭfṳl ɛrĕsçĕnts.

Their verdant slopes and wooded crests make the landscape picturesque. In the vista that forms the terminus of the valley that separates them, is nestled that quiet village, Pluckamin. Its spires and turrets glistening in the morning sun adorn this part of the prospect with artificial gems.

Farther north, where the Raritan wends its lazy way close up to the foot of Second Mountain, peers the spires of Lesser Cross Roads. Nearer by, half shielded from view by a forest, are seen the spires of Greater Cross Roads. Farther toward the north, dimmed by the azure of distance, we descry the spire of the church at Peapack. Nearer by, thro the broad plain, we see the winding course of a beautiful river. It is the Lamington. Upon its eastern bank, we see the spire and turrets of a scattered settlement,—the village Lamingtón. Nearer by, is seen that picturesque village Mechanicsville. Its glistening steeple and shining turrets peering amid umbrageous trees indicate the sanctuary of the pious, and the homes of the opulent, and the retired. Nearer by, are the dwellings of that neat village White House. While nearer by still, less than a mile

áwāy, ănd 580 fēet bēnēath ŭs, básks thăt new vĭllāġe knōwn ăs̱ Whīte House Stāṭiȯn. Its dwĕllĭṉgs̱, ăs̱ ĭf fĭnĭshed ŭndĕr á sĭṉgle cŏntrăct, äre a̤ll whīte, ănd äre kĕpt ăs̱ brīght ăs̱ sĭlvĕr spo̤ons̱. Hēre ĕvĕrȳthĭṉg ĭs̱ nēatnĕss ănd cōzĭnĕss. Its spāçiȯŭs strēets ănd shādĕd wa̤lks ĭndīcāte lēis̱ūre ănd rēfīnemĕnt. Hēre, ăs̱ bĭrds ĭn the̱ir flīght, wē lo̤ok down ŭpŏn pássĭṉg trāins ŏf trŭndlĭṉg cärs, frūitfṳl ḡärdĕns̱ ănd beaūtĭfṳl dōor yärds̱,—thĕ ĕmblĕms ŏf tāste ănd ĭndŭstrȳ.

Tōwärd thĕ southēast, thĕ view ĭs̱ ŭnŏbstrŭctĕd. As̱ wē ḡāze, wē sŭrve̱y thăt broa̤d ănd beaūtīfṳl vălleȳ ŏf thĕ Rărītán, to̤ ĭts tĕrmĭnŭs, ăt thĕ sēa. Nō hĭll ŏbstrŭcts, nō swĕll ŏf lănd ĭntĕrvēnes̱. Wĭth á ḡlàss, thĕ Rărītán Bāy ĭs̱ dĭstĭnctlȳ vĭsīble. Upŏn ĭts soŭthĕrn shōre, wē dēscrȳ thĕ spīres ŏf Kēypōrt. Nēar bȳ, äre sēen Pĕrth Amboy, South Amboy, New Brŭnswĭck, Mĭllstōne, Bound Bro̤ok, Sŏmĕrvĭlle ănd Rărītán. Whīle, wĭth thĕ ŭnāidĕd eȳe, fär out ŭpŏn thĕ soŭthĕrn pōrṭiȯn ŏf thĕ plāin, wē dēscrȳ thĕ spīres̱ ŏf Nōrth Brănch, Brănchvĭlle, Cĕntĕrvĭlle ănd Rĕadĭṉgtȯn.

As̱ thĕ fāçe ĭs̱ tŭrned tōwärd thĕ south,

thĕre ĕxtĕndṣ bēfōre ŭs, ȧ beaūtīfŭl plāin skĭrtĕd ăṣ fär ăṣ thĕ eȳe cȧn seăn, bȳ thĕ Sourlănd Rĭdġe. Thĭs plāin ĭṣ vāriēġātĕd bȳ ġrāçefŭl hĭllṣ, ġĕntle knōllṣ, sȳmmĕtrĭcȧl rĭdġĕṣ, vĕrdȧnt wo͝odlănḍṣ, fĕrtĭle fiēldṣ ănd nēat färm buĭldĭngṣ. Scăttĕred ōvĕr ĭt, ĭṣ mănў ȧ cōzў hămlĕt, ănd mănў ȧ quĭĕt vĭllāġe, mănў ȧ busў wŏrkshŏp ănd mănў ȧ fāithfŭl mĭll.

Aṣ wē sŭrveȳ thĭs plāin, thĕre pēerṣ ŭp tŏ viecw, thĕ tŭrrĕts ănd spīre ŏf Nēshănĭcȧe, Clōvĕr Hĭll, Cĕntĕrvĭlle, Reāvĭlle ănd Thrēe Brĭdġĕṣ. Hēre rĭṣĕṣ ŭp thĕ cŭrlĭng smōke frŏm ȧ făctōrў, thĕre ăsçĕnds thĕ sŏotў stēam frŏm thĕ lōcōmōtĭve. Whĭle cvĕrўwhere ăppēarṣ thĕ ĕmblĕmṣ ŏf ĭndŭstrў, prŏġrĕss, cŭltūre ănd rŭrȧl hăppĭnĕss.

Tōwärd thĕ southwĕst, fär ĭn thĕ dĭstȧnçe, pēers ŭp thĕ sŭmmĭt ŏf Gōat Hĭll. It ĭṣ 20 mĭleṣ ȧwāy. Thĭthĕrwärd ĕxtĕndṣ ȧ plāin thȧt ĭṣ dĭvĕrsĭfĭed wĭth rĭdġe ănd vāle, hĭll ănd vălleў, knōll ănd dĕll, fŏrĕst ănd fĭeld, rĭvĕr, rĭvŭlĕt ănd rĭll.

In thĕ dĭstȧnt ăzūre, flănkeđ bȳ bōld ĕmĭnençĕṣ, wē dēscrȳ thĕ spīre ăt Mount Airў. Nēarĕr bȳ äre sēen thĕ spīreṣ ăt Rĭngōṣ. Färthĕr nōrth, wē dēscrȳ thĕ spīre ŭpŏn thĕ

church upon Sandy Ridge. Farther north, upon the southern slope of Swamp Ridge, we descry the spires at Rosemont and Sergeantsville. While nearer by, within easy range, extends the beautiful village, Flemington.

Toward the west, over against us, and but a mile away, rises up the beautiful form of the Cushetunk. Its crescentic trend, its steep slopes, its graceful outlines and its verdant forests, form a spectacle at once grand and picturesque.

Farther south, at the distance of four miles, rises the forest crested summit of Round Mountain. Beyond, extends the bold ridge that forms the eastern terminus of the table-land of Huntsdon. Upon its topmost part, is seen the church and spire at Cherryville.

As we face the northwest, we look down upon that beautiful little circular plain, known as Round Valley. Verdant as the valley of the Nile, as level as the plain of Shinar, skirted upon all sides by verdant steeps and curving slopes, basking 500 feet beneath our feet, and not a half mile away, it is a spectacle of delight, a thing of exquisite beauty.

Beyond Round Valley, the surface rises in

ḡrāçefụl knōlls̱, sўmmĕtrĭcȧl hĭlls̱, stēep slōpes, lŏṉg rĭdġĕs̱ ănd hīgh hĭlls̱. Nēarĕr bȳ, äre sēen ŧhĕ drĭft hĭlls̱ ŏf sū ḡȧr-lōaf fōrm. Bēyŏnd äre ŧhĕ Fŏx Hĭlls̱ ănd ŧhĕ sïĕrrȧs̱ ŏf ŧhĕ Mŭscŏnĕtcŏṉg. Whīle fär bēyŏnd, pärtlў hĭddĕn bȳ ŧhĕ Mŭscŏnĕtcŏṉg, rīs̱ĕs̱ ŧhĕ bōld sŭmmĭt ŏf Scŏtt's Mountaĭn, ŧhĕ mōst ĕlēvātĕd pēak south ŏf ŧhĕ Blūe Rĭdġe.

Amĭd ŧhēs̱e hĭlls̱ äre beaūtīfụl vĭllāġĕs̱. Wĭŧhĭn ēas̱ў view, äre sēen ŧhĕ spīres̱ ŏf Annăndāle. Färŧhĕr ŏn, rīs̱ĕs̱ ŧhĕ pĭnnȧcles̱ ŏf Hīgh Brĭdġe. Whīle ȧ lĭttle tōwärd ŧhĕ south ămĭd ŧhĕ vĕrdȧnt dōmes̱ ŏf ŧhĕ drĭft hĭlls̱, äre sēen ŧhĕ ḡlĭstĕnĭṉg tŭrrĕts ănd stēeples̱ ŏf ŧhăt beaūtīfụl vĭllāġe, Clĭntȯn.

Thŭs, frŏm ŧhĭs pōsĭṭiȯn, ŭpŏn Pĭckle's̱ Mountaĭn, ŧhĕ stūdĕnt ĭn ăn hour ŏf tīme, māy sŭrve̱y ŧhĕ mōst beaūtĭfụl, ŧhĕ mōst dēlīghtfụl, ŧhĕ mōst vārĭed, ănd ŧhĕ mōst ĭnstrŭctĭve lăndscāpes̱. Frŏm nō ȯŧhĕr sīte ĭn N. J., căn sō mŭch bē sēen ĭn sō shōrt ȧ tīme. Oŧhĕr sītes ŧhĕre äre whĭch äre mōre ĕlēvātĕd. Bŭt, ĕxçĕptĭṉg Hīgh Point, ŭpŏn ŧhĕ Blūe Mountaĭns̱, ēach one ĭs̱ sō ĕnvīrŏned ŧhăt ŧhĕ stūdĕnt căn view ĭn bŭt few dīrĕcṭiȯns̱. One ḡrănd prŏspĕct ŧhĕre māy bē; ōr, pĕrhăps, ĭn ȧ vĕrў

few ɛāsĕs̱, two̤ ōr ŧhrēe. Bŭt, frŏm Pĭckle's̱ Mountaĭn, hĭs̱ fāçe māy bē tŭrned tōwärd ănў point ŭpŏn ŧhĕ hōrīzŏn, ănd ŧhĕre ăppēars̱ bēfōre hĭm ȧ lăndsɛāpe, bōŧh pĭɛtūrĕsque ănd ḡrănd.

TOUR OF CENTRAL NEW JERSEY.

MONMOUTH BATTLEFIELD,
2 A. M., JUNE 22d, 1882.

The morning of June 22d dawned fair and propitious. The air was salubrious, the sky cloudless. The matin voices of the native birds of the gardens, orchards and groves of Ringos filled the welkin with sweet music. But, of the creatures of that village, none were more light in heart, nor joyous in expectations, than the students of Geography of the Academy of Science and Art at Ringos. It was the day appointed for them to start upon a tour of Central New Jersey,—to be taught geography upon the road, in the field, in the valley, upon the hills, in the garden, in the grove, in the quarry, in the marl pit, upon the battle field, at the hamlet, in the village, thro the town, around the city, in public edifices, by the dancing rill, the spreading river, and by the sounding sea.

Earlĭĕr thăn thĕ bĭrds they ărōse. And, ăs they plĭed their hănds ĭn prēpārĭng thĕmsĕlves fōr thĕ dūtĭes ŏf thĕ dāy, their glăd heärts gāve ĕxprĕssĭon thro mĕrrў voĭcĕs ănd rādĭănt fācĕs. Bēfōre thĕ tĭme ăppoĭntĕd fōr mēetĭng ăt thĕ Acădēmў, all hăd ăssĕmbled, ănd wĕre rĕadў fōr thĕ bŭsĭnĕss ŏf thĕ dāy. Althō pĕnsĭve ănd ănxĭoŭs, flăshĕs ŏf wĭt, gŭshĕs ŏf hūmor ănd pĕrt jōkes bŭrstĭng frŏm ĕxprĕssĭve mouths prōvōkeđ thĕ mĕrrў laugh ănd mādе thĕ sēasŏn ŏf wāitĭng pàss plĕasăntlў.

Thĕ ĕărў-all hăd bēen păckeđ thĕ nĭght prēvĭoŭs. Sō, lābor was nŏt a făctor ŏf thĕ mātĭn hours. Thĭs gāve all a bĕttĕr ŏppōrtūnĭtў tŏ sŭrvey thĕ ĕnvĭrŏnmĕnts, ănd sēe thăt they hăd wĭth thĕm whatĕvĕr they mĭght nēed ōr wĭsh.

The students upon this tour were

JENNIE S. DILTS,	-	Ringos, N. J.
ORVILLE H. DILTS,	-	" "
CAROLINE HOWELL,	-	Trenton, N. J.
BEN L. JOHNSON,	-	Stockton, "
OSIE JOHNSON,	-	" "
BEN LARISON,	-	Ringos, N. J.
POLLY LARISON,	-	" "
MARY E. LARUE,	-	" "

GEORGE C. PRALL, - RINGOS, N. J.
J. W. QUICK, - " "
LAMBERT REED, - SANDBROOK, N. J.
MARY B. RUDEBOCK, - COPPER HILL, N. J.

THE TEACHERS WERE

MARY J. LARISON, - RINGOS, N. J.
MARY W. PRALL, - - " "
SARAH A. PRALL, - " "
C. W. LARISON, - - " "

THE DRIVER WAS

GEORGE T. DALRYMPLE, " "

At 7 o'clock, the order was given to be seated in the carry-all. Quickly each one was arranged in his place, and the vehicle was in motion. In order to ascertain the weight of the load, the waggon was placed upon the scales and weighed. We ascertained that the vehicle, baggage and party collectively weighed 5370 pounds. Of the things composing this weight, there was not much provision, and not a pound of provender. The load consisted almost entirely of the party, camping equipments, and the implements for the prosecution of scientific investigation.

As we quietly passed thro our village, from the piazza of many a house we were greeted

with warm salutations. The serenity of the countenance of our friends expressed the cordial wishes they had for our prosperity and our safety, and the melody of their voices told how much they were interested in our happiness.

At 8 o'clock, we passed thro the quiet village, Woodsville. At 9, we took leave of Hopewell. At 10, we viewed the quaint old church at Blawenburg. At 11, we passed thro the village, Rocky Hill. At 15 minutes before 12, we stopped upon the height of Mile Run to rest. Here, under the shade of spreading cherry trees, the gentlemen fixed the table, the ladies arranged our victuals and all dined.

Before dinner was over, the students were informed that they were resting upon classic ground. The cherry trees under which we ate are a part of the shade trees that surround a very old frame house that stands upon an elevation that commands the prospect of a large area of country. In this old house, history tells us, General George Washington wrote his farewell address to the American Army. Although old, the house is in good repair, and is very much visited,—especially by

thĕ stūdĕnts ŏf Prĭnçetȯn ănd ŏf Rŭtġĕrs̱ Cŏllēġĕs̱.

As̱ wē trăvĕlĕd, dūrĭṉg thĕ mōrnĭṉg, sŭch ġēōgrăphĭc ĭnstrŭcṭiȯn wạs̱ ḡĭvĕn ăs̱ wạs̱ nĕçĕssārў tọ fụllў prēpāre thĕ stūdĕnts tọ cŏmprēhĕnd thĕ vārĭoŭs prŏspĕcts thăt prēsĕntĕd, ănd thĕ vārĭoŭs ŏbjĕcts thăt wē pȧsseđ. Thĕ stūdĕnts wĕre ăttĕntĭve tọ ĭnstrŭcṭiȯn ănd sēemed dēlīghtĕd wĭth thẹir ŏppōrtūnĭtĭes̱ fōr thĕ ŏbs̱ĕrvāṭiȯns̱ thẹy wĕre mākĭṉg.

Nōrth ŏf Rŏckў Hĭll ănd Mīle Rŭn Hĭll ĭs̱ thĕ mōst soŭthĕrlў dĕpŏsĭt ŏf drĭft ĕarth found ĭn N. J. It ĭs̱ ĭsōlātĕd ănd hăs̱ mănў pēculĭărĭtĭes̱. Its rĕddĭsh yĕllōw ăppēarȧnçe, ănd ĭts hēap ŏf roundĕd flĭntў cŏbble-stōnes̱ rĕadĭlў ăttrăctĕd thĕ ăttĕnṭiȯn ŏf ạll.

As̱ wē cāme nēar Rŏckў Hĭll, ĭn thĕ bănk ȧlŏṉg thĕ sīde ŏf thĕ rōad wạs̱ sēen thĕ rēlāṭiȯn thăt thĕ fōrmāṭiȯn ŏf thĕ Drĭft Pērĭŏd beārs̱ tọ thĕ Rĕdshāle. At thĭs point, thĕ rĕdshāle rŏck ĭs̱ dĭstĭnctlў sēen sūpĕrĭmpōs̱ed bў ȧ strātŭm ŏf thĕ ḡrăvĕllў ănd ḡrĭttў ĕarth pēcūlĭȧr tọ thĕ drĭft fōrmāṭiȯn. Thĭs phēnŏmēnŏn wạs̱ frēelў dĭscŭsseđ, ănd ĭts ĭmpōrtȧnçe wĕll ĭmprĕsseđ.

At 1 ō'clŏck, wē mountĕd thĕ cărrў-ạll ănd rēs̱ūmed our toūr. Nēar Kĭṉgs̱tȯn, ŏn thĕ

ēastĕrn bănk ŏf ŧhĕ Dĕlȧwāre ănd Rărītȧn ɛănȧl, ĭs̱ ăn ĕxtĕnsĭve quärrў, ĭn ŧhĕ ĭndūrātĕd rŏck ŏf ŧhĕ Trīăssĭɛ fōrmāṭiȯn. Hēre ĭs̱ ăn ĕxçĕllĕnt ŏppōrtūnĭtў to̤ stŭdў ŧhĕ rēlāṭiȯn ŏf ŧhĕ Trīăssĭɛ to̤ ŧhĕ Crētāçeoŭs fōrmāṭiȯn. To̤ ŧhĭs quärrў, wē ḡāve spĕçiȧl ăttĕnṭiȯn. In ŧhĭs quärrў, ŧhĕ Trīăssĭɛ rŏck ĭs̱ wŏrkeđ vĕrtĭɛȧllў, to̤ ŧhĕ dĕpŧh ŏf ŧhĭrtў fēet, ōr mōre. Dīrĕɛtlў ŭpŏn ŧhĭs Trīăssĭɛ rŏck, ȧll ălŏṉg ŧhĕ brĕast ŏf ŧhĕ quärrў, ĭs̱ sēen rēpōs̱ĭṉg ŧhĕ yĕllōwĭsh ḡrăvĕllў strātā ŏf ŧhĕ ɛrētāçeoŭs fōrmāṭiȯn. A bōldĕr ĕxhĭbĭṭiȯn ŏf ŧhĕ rēlāṭiȯn ŏf ŧhēs̱e two̤ fōrmāṭiȯns̱ ɛọuld nŏt bē sŏught, ănd prŏbāblў, sō gọod ăn ĕxhĭbĭṭiȯn ŏf ŧhĭs rēlāṭiȯn ĭs̱ nōwhĕre ĕlse found.

Bēlōw Kĭṉgstȯn, wē lĕft ŧhĕ Trīȧs ĕntīrelў. Hēre ŧhĕ whōle ġēŏḡrăphĭɛ ăspĕɛt ĭs̱ ɛhānġed. Hēre ĭs̱ sēen ŧhĕ ɛlāyeў soil ŏf ŧhĕ lōwĕr ɛrētāçeoŭs, wĭŧh ĭts fŏrĕsts ŏf pāpĕr bĭrɛh ănd bŭttȯnwọod. Hēre, ĭn mănў plāçĕs̱, ŧhĕ soil ĭnɛlīnes̱ to̤ blṳe. Thĕ swa̤mps äre sŭrprīs̱ĭṉglў ŧhĭck wĭŧh trēes̱. Bēnēaŧh ŧhēs̱e, ĭs̱ ȧ ŧhĭck ŭndĕrḡrōwŧh ŏf bŭshĕs̱, brămbles̱ ănd trāilĭṉg plȧnts. Hēre ŧhĕ ḡrēen brīĕr (Smīlȧx rōtŭndīfōlĭȧ,) ănd ɛărrĭŏn plȧnt (Smīlȧx hĕrbāçēȧ) ḡrōw lŭxūrĭȧntlў. Hēre äre found lĭlĭes̱ ĭn

great abundance. Here grows the bulrush to great perfection.

That the geographic element may be better understood, I briefly allude to the geological structure of the central part of N. J.

Stretching southwest from the Palisades, on the Hudson and the Raritan Bay to the Delaware, between Trenton and Johnson's Ferry, is that area of land known as the Trias,—formed during the first period of the Reptilian Age. The surface of this area is diversified with ridges and valleys that, in the main, trend northeast and southwest. The ridges of greatest length, and greatest elevation, as a rule, consist of a core of Basaltic Trap, flanked on either side by indurated shale. Between these long ridges, extend broad valleys, the surface of which is rolling, undulating, ridgy or knolly.

The rock of this area, for the most part, is a sandstone,—in some places so well bedded, and so gritty, that it affords excellent building stone; but, in most places, it is fine grained, laminated, rich in organic elements, and, when exposed to the air, very unstable, soon disintegrating into rich soil. In many places, this

rŏck ĭs rĕd, ōr sŏme shāde ŏf rĕd. Hĕnçe, tọ sŏme pärts ŏf thĕ dĭstrict, thĕ tĕrm Rĕdshāle ĭs ăpplĭed. Of thēse dĭstrĭcts, thĕ soil, ăs à rụle, ĭs hĕavў ănd tīght—bŭt vĕrў fĕrtĭle.

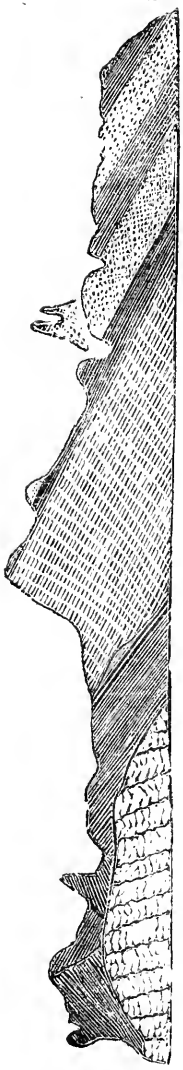
In lŏng crĕsçĕntĭc lines, ăt vărĭoŭs plāçĕs, pēers ăbóve thĭs rĕd săndstōne, thĕ out-crŏp ŏf ĭmmĕnse dīkes ŏf Bàssàltĭc Trăp. Thĭs trăp, dĭsĭntĕgrātĕd bў ătmŏsphĕrĭc āgĕnçiĕs, fōrms à grĭttў soil, thăt ĭs vĕrў frĭable, ănd vĕrў fĕrtĭle.

Sŏuth ŏf thĕ Trĭas ĕxtĕnds à bĕlt thăt was fōrmed dūrĭng thĕ clōsĭng pērĭŏd ŏf thĕ Rĕptĭlĭan Age. Thĭs ĭs knōwn ăs thĕ Crētāçeoŭs. Cŏnçĕrnĭng thĕ ārēà, Prŏf. Cọok, ĭn thĕ Gēŏlōgў ŏf N. J., cŏmplētĕd ĭn 1868, stātes: "Thĕ Crētāçeoŭs Formātiọn, ĭn New Jĕrseў, cŏnsĭsts ŏf à sēriēs ŏf bĕds, ōr strātà, lўĭng cŏnfōrmablў ŭpŏn eaçh ŏthĕr, ănd ạll hăvĭng à gĕntle dēscĕnt, ōr dĭp, tōwards thĕ southēast. Thĕ strātà dĭffĕr from eaçh ŏthĕr ĭn mĭnĕràl cŏmpōsĭtiọn; bŭt, thęy äre ạll ĕarthў ĭn fōrm, ĕxçĕpt ăt à few dētăchĕd points, whĕre thĕ mātĕrĭàl hăs bēen çēmĕntĕd bў ōxĭde ŏf īrŏn, ĭntọ à kĭnd ŏf sănstōne, ōr cŏnglŏmĕrāte. Thęy ăppēar tọ hăve lāin ŭndĭstŭrbed ĕvĕr sĭnçe thęir dēpōsĭtiọn frŏm thĕ ōçeàn; hăvĭng nō

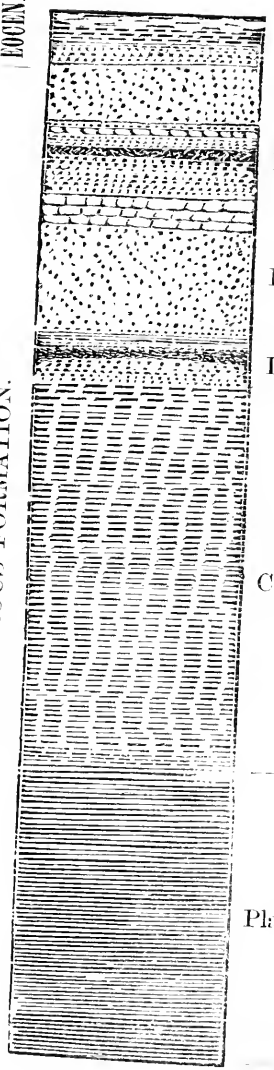
fōlds̱, ōr ꞓŭrves̱, ĭn Ɑhĕm, bŭt lȳĭṉg smo̤oⱭh ănd părăllĕl, līke Ɑhĕ lēaves̱ ŏf ȧ bo̤ok. As̱ Ɑhĕ dĭp ŏf Ɑhĕ strātȧ ĭs̱ tōwärds̱ Ɑhĕ soⱭhēast, Ɑhe̱ir ĕdġĕs̱ ꞩhōw Ɑhĕmsĕlves̱ ŭpŏn Ɑhĕ sŭrfȧçe ĭn nōrⱭhēast ănd soⱭhwĕst līnes̱. If Ɑhĕ sŭrfȧçe wĕre ūnĭfōrm, Ɑhēs̱e līnes̱ wo̤uld bē strāight; bŭt, ōwĭṉg to̤ ĭnēquȧlĭtiēs̱ ŏf Ɑhĕ sŭrfȧçe, Ɑhe̱y prēs̱ĕnt ĭrrĕḡūlărĭtiēs̱ ŏf ḡreātĕr ōr lĕss ĕxtĕnt, ꞓŭrvĭṉg to̤ Ɑhĕ nōrⱭhwĕst ŏn hīgh ḡroⱭnd, ănd to̤ Ɑhĕ soⱭhēast ŏn lōw, ōr dēsçēndĭṉg ḡroⱭnd. Thĕ lōwĕst strātȧ hăve Ɑhe̱ir oⱭtꞓrŏp färⱭhĕst to̤ Ɑhĕ nōrⱭhwĕst."

"Thĕ sĕꞓṭiȯn frŏm Ra̤hwāy, ĭn Mĭddlesĕx CoⱭntȳ, to̤ Dēal, ĭn MŏnmȯuⱭh CoⱭntȳ, (ȧ Fĭḡūre ŏf whĭꞓh ĭs̱ ĭnsĕrtĕd ŭpŏn pāġe 122,) ꞩhōws̱ a̤ll Ɑhĕ bĕds̱ ĭn Ɑhĕ ōrdĕr ŏf Ɑhe̱ir ŏꞓꞓŭrrĕnçe, ăs̱ sēen whĕn lo̤okĭṉg nōrⱭhēast. a ĭs̱ gneīss; b ĭs rĕd săndstōne (Trīȧs); c ĭs̱ plăstĭꞓ ꞓlāy; d ĭs̱ Ɑhĕ lămĭnātĕd sănd ănd Ɑhĕ ꞓlāy märl; e ĭs̱ Ɑhĕ lōwĕr märl bĕds̱; f ĭs̱ Ɑhĕ rĕd sănd; g ĭs̱ Ɑhĕ mĭddle märl bĕd; h ĭs̱ Ɑhĕ yĕllōw sănd, and i ĭs̱ Ɑhĕ ŭppĕr märl bĕd."

"Thĕ fĭḡūre ŏn Ɑhĕ sŭꞓçēedĭṉg pāġe ĭs̱ ȧ ꞓŏlŭmnȧr sĕꞓṭiȯn, ꞩhōwĭṉg a̤ll Ɑhĕ bĕds̱ ŏf Ɑhĕ Crētāçeoŭs Fōrmāṭiȯn ăs̱ Ɑhe̱y wo̤uld ăppēar ĭf



Section from Railway to Deal.


EOCENE.
CRETACEOUS FORMATION.
Upper Marl Bed.
Yellow Sand.
Middle Marl Bed.
Red Sand.
Lower Marl Bed.
Clay Marls.
Plastic Clay.

piled one on top of another, throughout, and in the order of their succession."

With Plastic Clays "are inclúded the fire and álum clays" "and the pottérs' clays."

"There are alsó," in the Plastic Clay Formátion, "beds of light colóred sand; and, in mány pláces, fóssil trées and beds of lignite are found. This part of the formátion occupies the northwéstern bórder of the district."

The súrface of the outcróp of the Plastic Clay Formátion is, for the most part, a very nárrow válley—almóst a trough, that extends éntirely across from the Ráritan to the Délawáre. Its súrface is the lówest of all the land in the céntral part of the State. Indéed, thro this trough the Délawáre and Ráritan cánal extends. Of this cánal, the súmmit lével is ónly 58 féet above the tide in the Ráritan. Thro it, the wáter of the Délawáre áctually flows into the Ráritan.

South of the trough of Plastic Clay, the súrface rises gradúally to the height of néarly 200 féet. The súrface here is sómewhat úndulating; but it maintains this élevátion, almóst down to Cúmberland County.

To this bélt of clay súcceeds the bélt of

clāy-märl—fĕrtīle ănd vĕrў ărȧble. Thĕ sŭrfȧçe ŏf thĭs ĭs gĕntlў rōllĭng, ănd wĕll ădăptĕd tọ ăgrīcŭltūre. Thĕ lănds¢āpe hēre ĭs ăttrăctĭve; ĕspĕçiȧllў sō tọ one whọ hăs bēen rēared ȧmĭd thĕ hĭlls ŏf Hŭntĕrdọn. Hēre ȧre fīne färms, ĕxçĕllĕnt färm buĭldĭngs, gọod fĕnçĕs ănd wĕll tĭlled fiēlds. Hēre ȧre gọod ōrchȧrds, gọod mĕadōws, gọod fiēlds ŏf rўe, lärġe fiēlds ŏf whēat, ănd ăn ĕxçĕllĕnt grōwth ŏf tĭmōthў ănd clōvĕr. Hēre māize grōws lŭxūrĭȧntlў ănd thĕ pōtātō floŭrĭshĕs ădmĭrȧblў.

Thĕ bĕlt ŏf Clāy-märl ĭs wīde. Tọ thĭs sŭççēeds thĕ bĕlt ŏf rĕd sănd soil, thĕ outcrŏpping ŏf thĕ rĕd sănd lāyĕr ŏf thĕ lōwĕr crētāçeoŭs. In thĕ ōrdĕr ŏf sŭ¢çĕssiọn ŏf thĕ crētāçeoŭs fōrmāṭiọn, thĭs ĭs thĕ thĭrd. Of thĭs, thĕ soil ĭs vĕrў ărȧble, ănd, ĭn ĕvĕrў rēspĕ¢t vĕrў sūitȧble tọ tĭllāġe. And, ăs ĭt ĭs nēar thĕ greāt märl bĕlt, ĭt hăs bēen lĭbĕrȧllў drĕsse¢ wĭth märl ŭntĭl ĭt ĭs vĕrў fĕrtīle. Upŏn thĭs soil, ĕvĕrўthĭng sēems tọ thrīve ănd ĕvĕrўbŏdў sēems tọ bē prŏspĕroŭs.

Thĕ soil ŏf thĭs bĕlt ĭs dīvĭdĕd ĭntọ lärġe färms. Thēse ȧre dīvĭdĕd ĭntọ lärġe fiēlds, whĭch ȧre wĕll fĕnçe¢ ănd wĕll tĭlled. Hēre

thĕ färm buĭldĭngs äre spāçioŭs, nēat, ănd ōrdĕrlў ărrānġed. As stōnes äre scārçe, thĕ foundāṭiȯns ŏf buĭldĭngs, thĕ ȧbŭtmĕnts ŏf brĭdġĕs, ănd thĕ walls ŏf wĕlls äre ŏftĕn buĭlt ŏf brĭcks.

In thĭs rēġiȯn, ăs wĕll ăs ĕlsewhĕre ĭn thĕ crētāçeoŭs fōrmāṭiȯn, thĕ wĕlls äre dēep ănd thĕ watĕr vĕrў cool. To fīnd ȧ wĕll eightў ōr one hŭndrĕd fēet dēep ĭs nŏt ȧ rārĭtў hēre. Thĕ "ōld ōakĕn bŭckĕt," thĕ ōpĕn wĕll cŭrb, ănd thĕ lŏng mănĭllȧ rōpe äre ĭn mŭch ūse hēre. Exçĕptĭng ĭn çĭstĕrns, pŭmps äre sĕldȯmlў sēen.

Thĕ strēams hēre flōw slŭg̃g̃ĭshlў, ănd thĕ watĕr ŏf thĕm ĭs pēcūlĭȧr. It looks līke thĕ watĕr thăt flōws frŏm tăn-yärds. Althō thĕ bĕds ŏf thĕ strēams cŏnsĭst ŏf beaūtĭful brīght pĕbblĕs, they căn bē sēen wĭth dĭffĭcŭltў. Thĕ cŏlŏr ŏf thĕ watĕr ĭs yĕllōwĭsh,—vĕrġĭng tōwärd blăck. Its tāste ĭs slīghtlў stĭptĭc, ōr ăstrĭnġĕnt.

Thĕ soil hēre cŏntāins fĕrrĭc sŭlphāte. As thĕ pluvĭȧl watĕrs pĕrcōlāte thro ĭt, thĭs salt ĭs lēached out. Thĭs ăctĭng ŭpŏn thĕ ōrg̃ănĭc măttĕr, wĭth whĭch ĭt cȯmes ĭn cŏntăct, fōrms ȧ cŏmpound whĭch hăs ȧ pēcūlĭȧr cŏlȯr. Thĭs

cŏmpound ĭs̱ vĕrў sŏlūble ĭn wa̤tĕr, ănd ĭs̱ thĕ cŏlŏrĭṉg măttĕr ŏf thēs̱e strēams̱.

Thĕ pēcūlĭărītĭes̱ hēre nōtĭçed äre nŏt cŏnfīned to̤ thĕ wa̤tĕr ŏf thēs̱e rĭvūlĕts. All thĕ strēams̱ thăt drāin thĕ crētāçeoŭs fōrmāṭiȯn, ĭn New Jĕrs̱eў, prēs̱ĕnt kĭndrĕd pēcūlĭărĭtĭes̱. In sȯme, thĕ wa̤tĕr ĭs̱ nŏt sō därk, a̤lthō mōre ăstrĭnġĕnt; ĭn mănў ĭt ĭs̱ därkĕr. Tōwärds̱ thĕ sēa, wē hăve sēen thĕ wa̤tĕr ŏf thĕ rĭvūlĕts a̤lmōst ăs̱ blăck ăs̱ ĭnk. Thĭs blăck wätĕr ĭs̱ sȯmetīmes̱ vĕrў sĭckĕnĭṉg to̤ thĕ pălāte, ănd vĕrў na̤us̱ēātĭṉg to̤ thĕ stŏmȧch.

Usūȧllў, thĕ tŭrtles̱, snākes, fĭshĕs̱, crŭstāçeȧns̱, &c., &c., thăt ĭnhăbĭt thēs̱e strēams̱ äre tĭnctūred wĭth thĭs fĕrrĭc sŭlphāte ănd prēs̱ĕnt ȧ dĭrtў ōr dŭll ăppēarȧnçe. Nōr ĭs̱ thĕ flĕsh ŏf thĕ fĭshĕs̱ frēe frŏm thĕ tāste pēcūlĭȧr to̤ thĕ wa̤tĕr ĭn whĭch they lĭve. Hĕnçe, thĕ fĭshĕs̱ ŏf thēs̱e strēams̱ äre nŏt mŭch prīzed fōr fo̤od.

Dūrĭṉg thĕ ăftĕrno̤on, wē pȧssed thro̤ thĕ bus̱ў vĭllāġĕs̱ Mŏnmoŭth Jŭnctiȯn, Dāytȯn, Jāmes̱bŭrḡ, ănd Eṉglĭshtown.

Mŏnmoŭth Jŭnctiȯn ĭs̱ ȧ nōtĕd rāilroad çĕntĕr. Thĭs vĭllāġe ĭs̱ sma̤ll, new ănd nēat.

In pŏpūlāṭiȯn ănd wĕalth, ĭt ĭs̱ ĭnerēasĭṉg. So̤on ĭt wĭll bē ȧ vĭllāġe ŏf ĭmpōrtȧnçe.

Thĕ vĭllāġe Dāytȯn, two̤ mīles̱ bēyŏnd Mŏnmoŭth Jŭneṭiȯn, ĭs̱ ȧ sma̤ll plāçe thăt prēs̱ĕnts sȯme pēcūlĭȧrĭtĭes̱. Thĕ coŭntrў ăround ĭt ĭs̱ beaūtīfṳl. Thĕ soil ĭs̱ ḡo̤od ănd wĕll tĭlled. Thĕ färms̱ äre lärġe ănd thĕ buĭldĭṉgs ḡo̤od.

Althō thĭs vĭllāġe cŏntāins̱ bŭt one stōre ănd ȧbout ȧ dŏzĕn hous̱ĕs̱, ĭt hăs̱ two̤ vĕrў hăndsȯme hōtĕls̱. Thēs̱e äre ŏppōs̱ĭte to̤ ēach ȯthĕr, ănd sēem to̤ bē do̤ĭṉg ȧ cŏnsĭdĕrȧble ŏf bus̱īnĕss.

Wē wĕre plēas̱ed wĭth Jāmes̱bŭrḡ. Indēed, thĭs ĭs̱ ȧ beaṳtĭfṳl vĭllāġe. Hēre thĕ to̤ot ŏf thĕ lōcōmōtĭve whĭstle ĭs̱ ĕvĕr rĭṉgĭṉg ĭn thĕ ēars̱. Thĕ dēpōt ĭs̱ ȧ bus̱ў plāçe. Hēre wē sa̤w mŭch ŏf thăt hŭrrў ănd bŭstle thăt ūs̱ūȧllў ăttĕnd bus̱ў rāilrōad dēpōts; thĕ māidĕn wĭth hĕr po̤odle, thĕ lādў wĭth hĕr bŭndle, thĕ wo̤mȧn wĭth hĕr chĭldrĕn, thĕ bṳtchĕr wĭth hĭs̱ trous̱ĕrs ĭn hĭs̱ bo̤ots, thĕ tēamstĕr wĭth hĭs̱ lāzў hōrse ănd drāy, thĕ färmĕr wĭth hĭs̱ prănçĭṉg năḡ—a̤ll mĭxĭṉg thro̤ ănd thro̤ līke swa̤rmĭṉg bēes.

Bēyŏnd Jāmes̱bŭrg, wē̇ vĭs̱ĭtĕd ȧ crănbĕrrў märsh. To̤ thĕ stūdĕnts thĭs wa̤s̱ ȧ cūrĭŏsĭtў.

Mănў ŏf thĕm sŭppōsed thăt crănbĕrrĭes grew ŭpŏn bŭshĕs. Bŭt, to their greāt sŭrprīse, they saw thăt thĕ crănbĕrrў ĭs thĕ fruit ŏf à small trāilĭng vīne. Thĕ plànt ĭs āquătĭc, ănd vĕrў tēnāçioŭs ŏf līfe; ănd whĕn onçe ĭt ĭs wĕll rootĕd ĭnto à soil ădăptĕd to ĭts cŭltūre, thĕre ĭs nō plànt thăt căn crowd ĭt out, ōr stŭnt ĭts grōwth. Its vīnes äre lŏng, slĕndĕr, ănd vĕrў strŏng. Thĕ lēaves äre few ănd small, ănd mŭch rēsĕmble thōse ŏf thĕ bŏx-bŭsh. They äre à brīght grēen, ănd äre ărrāṅged ŏppōsĭte. Thĕ flowĕrs äre whīte ănd small, bŭt beaūtĭful. Thĕ bĕrrĭes äre àbout thĕ sīze ŏf à chĕrrў, round, rĕd ănd ĭntĕnselў sour.

As wē viewed thĭs crănbĕrrў märsh frŏm thĕ cărrў-all, ĭt lookeđ līke à lĕvĕl gärdĕn, thăt was ĭntĕrsĕctĕd wĭth dĭtchĕs dīvīdĭng ĭt ĭnto rĕgūlàr plŏts, còvĕred wĭth à mōst lŭxūrĭànt grōwth ŏf sòme crĕepĭng vīne. On ĭnspĕcṭiòn, wē found thăt thĭs märsh was thĕ rēsŭlt ŏf ĕxquĭsĭte lābòr. Thĕ grounds ŏn whĭch ĭt was, hăd bēen à pēat märsh. Frŏm thĭs pēat märsh, thĕ sŭrfàçe tŭrf hăd bēen rēmoved, ănd thĕ pēat bēnēath māde pĕrfĕctlў lĕvĕl. Thro thĭs plāin, ăt ĭntĕrvàls ŏf twĕntў fēet,

hăd bēen dŭg dĭtchĕs two fēet wīde ănd two fēet dēep. In thĭs wāy, thĕ whōle ārēa hăd bēen dīvīdĕd ĭnto plŏts ōr bĕds thăt ĕxtĕnd frŏm one sīde ŏf thĕ märsh to thĕ ŏthĕr.

Upŏn thĕ lĕvĕlĕd sŭrfăce ŏf thĕ pēat ŏf thēse plŏts, whīte sănd hăd bēen strewn to thĕ dĕpth ŏf fīve ĭnchĕs. Thro thĭs whīte sănd down ĭnto thĕ pēat bēnēath, to thĕ dĕpth ŏf fĭftēen ĭnchĕs, à hōle hăd bēen māde, by mēans ŏf à pointĕd īrŏn. Into thĭs hōle, down dēep ĭnto thĕ pēat hăd bēen ĭnsĕrtĕd thĕ root ŏf thĕ crănbĕrry plănt. Then, to sēcūre thĕ prŏpĕr ămount ŏf moistūre ăt all sēasons ŏf thĕ yēar, ălŏng thĕ lōwĕr sīde ŏf thĕ märsh thĕre was buĭlt à strŏng dăm, prōvīdĕd wĭth sūitable wāste gātes ănd thĕ lĭke, sō thăt thĕ watĕr ŏf thĕ strēam thăt drāins ĭt cănnŏt bē mādе to rīse ĭn thĕ dĭtchĕs ăt wĭll; ōr ēvĕn to ōvĕrflōw thĕ ĕntīre märsh, whĕn nēedĕd. Indēed, watĕr ĭs ăn ĭndĭspĕnsable rĕquīsĭte to crănbĕrry cŭltūre, ĕspĕcĭallў dūrĭng thĕ wĭntĕr. Watĕr ĭs thĕ greāt prōtĕctor ăgāinst frŏsts. Dūrĭng cōld wĕathĕr, thĕ crănbĕrry thrīves bĕst whĕn kĕpt ŭndĕr watĕr. Cŏnsequĕntlў, dūrĭng thĕ cōld wĕathĕr ŏf wĭntĕr, thĕ gātes ŏf thĕ dăm ăre clōsed ănd thĕ ĕntīre märsh ĭnŭndātĕd.

Thĕ cŏst ĭncŭrred ĭn prēpārĭng ȧ crănbĕrrў märsh ĭs făbūloŭs. Thĕ prōprīētȯr ŏf thĭs märsh stātes thăt ĭt cŏst hĭm ȧ lĭttle ōvĕr $1100 ăn ācre to prēpāre thĕ ground ănd to plȧnt thĕ vīnes. Bŭt, whĕn onçe thĕ ground ĭs prēpāred ănd thĕ vīnes wĕll rootĕd ĭn, ȧ fōrtūne ĭs sēcūred. Thĕ märsh lȧsts, tīme wĭthout ĕnd. Thĕ ōldĕr thĕ märsh thĕ mōre prōlĭfĭc thĕ vīnes. Hĕnçe, thĕ sŭbsēquĕnt cŏst ŏf tĭllāġe ĭs nŏmĭnȧl; ănd thĕ ănnūȧl cŏst ĭncŭrred ĭn thĕ rēpāir ŏf thĕ dăm ănd thĕ dĭtchĕs cănnŏt bē vĕrў ġreāt.

Thĭs märsh ĭs now ēlĕvĕn yēars ōld. It ĭs vĕrў floŭrĭshĭng. Dūrĭng thēse yēars thĕ ănnūȧl cŏst hăs bēen thăt ŏf rēpāirĭng thĕ dăm ănd ăttĕndĭng thĕ dĭtchĕs.

Thĕ ĭncȯme frŏm ȧ crănbĕrrў märsh ĭs ȧlsō făbūloŭs. Thĕ prōprīētȯr ŏf thĭs one stātes thăt hē hăs rēȧlīzed $900 pĕr ācre frŏm ĭt ĭn one yēar. Hē ȧlsō stātes thăt ȧbout $600 pĕr ācre ĭs ăn ăvĕrāġe yiēld. Thĭs märsh ĭs nŏt lärġe; ĭt cŏntāins ōnlў ēlĕvĕn ācres.

Bēyŏnd Jāmesbŭrġ, wē vĭsĭtĕd ănd ĕxămĭned ȧ pēat märsh. Thĭs ĭs ȧ Gēōlŏġĭc fōrmȧṭiȯn ĕntīrelў new to thĕ stūdĕnts ŏf thĕ Acădēmў. In ĭt they took vĕrў ġreāt ĭntĕrĕst.

It sō hăppĕned thăt thĭs märsh hăd lātelў bēen drāined bў thĕ ĭntĕrsĕctĭng ŏf dĭtchĕs. Of thēse, sŏme wĕre wīde ănd dēep; sŏme wĕre wīde ănd shăllōw. They wĕre all cāsў ŏf ăccĕss; sō our ŏppōrtūnĭtў fōr ĕxămĭnātĭon was gŏod.

Pēat ĭs băd stŭff fōr stāinĭng hănds ănd clōthes; ănd they who ĭntĕnd tŏ ĕxămĭne ĭt mŭst ĕxpĕct tŏ gĕt their hănds ănd clōthes soiled. Bŭt, wē wĕre prōvĭdĕd ăgāinst soilĭng thĭngs ŏf vălūe; ănd sō wē wādĕd ĭntŏ thĕ dĭtchĕs ănd prŏcēedĕd tŏ busĭnĕss.

Upŏn ĕxămĭnātĭon, thĕ walls ŏf thĕ dĭtchĕs wĕre found tŏ cŏnsĭst ŏf a măss fōrmed ŏf lēaves, twĭgs, stĭcks, rŏots ănd lŏgs thăt hăd sō făr ŭndĕrgŏne thĕ prŏcĕss ŏf dēcāy thăt they wĕre ĕntīrelў sŏft ănd frīable. Frŏm thĕ bănk cŏuld bē tākĕn a hăndfŭl ŏf thĕ blăck măss thăt wŏuld yiēld tŏ thĕ prĕssūre ŏf thĕ fĭngĕrs älmōst līke a spŏnge. Nōr was ĭt dĭffĭcŭlt tŏ clăsp thĕ hănd sō tĭghtlў thăt thĕ ĕntīre măss ĕscāpeđ bў squĭrtĭng bētwēen thĕ fĭngĕrs. It cŏuld bē wŏrkeđ ŭp ĭntŏ bălls lĭkĕ dōugh; ōr ĭt cŏuld bē spādĕd out ĭn blŏcks lĭke brĭcks; ōr ĭt cŏuld bē cŭt ĭntŏ lärge blŏcks lĭke piēcĕs ŏf wŏod. Indēed,

ŭpŏn ŧhĕ sīdes̱ ŏf mănў ŏf ŧhĕ dĭtchĕs̱ wĕre pīled ănd drīed lärġe hēaps fōrmed ŏf spādefṳls ŏf ŧhĕ blăck mātērĭȧl ăs̱ rĕḡūlȧr ĭn shāpe ăs̱ ŧhō ĭt hăd jŭst bēen lĭftĕd frŏm ŧhĕ pĭt ănd wạs̱ yĕt ŭpŏn ŧhĕ spāde.

In mănў plāçĕs̱ ĭn ŧhĭs pēat ŧhĕ fōrm ŏf ŧhĕ lēaf wạs̱ found pĕrfĕct. Stĭcks, wĭŧh ŧhĕ bărk yĕt ŏn, shōwed ŧhĕ strŭctūre ŏf ŧhĕ wọod, ŧhĕ rĭnḡs̱ ŏf ḡrōwŧh, ŧhĕ lĭḡnēoŭs fībre ănd ŧhĕ sĭlvĕr-ḡrāin, ăs̱ plāinlў ăs̱ ŧhĕ trēes̱ frĕsh frŏm ŧhĕ fŏrĕst. Lŏḡs̱, ȧ fọot ĭn dīămētĕr, bŭrĭed 4 fēet bēnēaŧh ŧhĕ sŭrfȧçe, lọoked pĕrfĕct ănd sŏlĭd ĕnȯugh fōr buĭldĭṉg tĭmbĕr. Bŭt, tọ ŧhĕ slīghtĕst prĕssūre, ŧhe̱y yiēldĕd; ănd, wĭŧh ŧhĕ hănd, ŧhe̱y wĕre ēas̱ĭlў crŭmbled tọ smạll părtĭcles̱, ōr squēezed ĭntọ ȧ sŏft, spŏṉgў mȧss.

Pēat ĭs̱ ăn ĕxçĕllĕnt fĕrtĭlīzĕr ănd ĭs̱ mŭch ūs̱ed fōr ĕnrĭchĭṉg ŧhĕ lănd. It ĭs̱ nŏt ūs̱ūȧl howĕvĕr, tọ ăpplȳ ĭt tọ ŧhĕ lănd rạw. Thĕ fărmĕr ūs̱ūȧllў prēpāres̱ ĭt bȳ cŏmpōstĭṉg ĭt wĭŧh mănūre; ōr wĭŧh līme; ōr wĭŧh ăshĕs̱; ōr wĭŧh blọod; ōr wĭŧh rĕfūs̱e ŏf ŧhĕ sōap wȯrks. Fĭxed ĭn ŧhĭs wāy, ĭt ĭs̱ săid tọ bē ȧ sūpērĭȯr drĕssĭṉg fōr lănds̱ ȧbout tọ bē plȧntĕd wĭŧh

pōtātōes̱. Mănў fărms̱ hăve bēen māde ĕxçēedĭṉglў fĕrtĭle bȳ ŧhĕ ūse ŏf pēat.

Pēat ĭs̱ a̤lsō ɛŏmbŭstīble. Whĕn spādĕd out, pīled ŭp ănd drīed, ĭt māy bē bŭrned ăs̱ fūĕl. In ŧhĭs wāy, ĭt ĭs̱ sȯmetīmes̱ ūs̱ed. Bŭt, ĭt ĭs̱ ĭnfērĭȯr to̤ ɛōal. Wḥĕn ĭntĕndĕd fōr fūĕl, ĭt ĭs̱ ūs̱ūȧllў wa̤shеđ, ḡround ŭp ănd ŧhĕn păckеđ ĭnto̤ sma̤ll ɛākes. Thĭs ĭs̱ dȯne bȳ māɛhïnērў. Fōr wȯrkĭṉg pēat ĭnto̤ fūĕl, ŧhĕre äre sĕvĕrȧl făɛtōriēs̱.

Thĕ fōrmāṭiȯn ŏf pēat ĭs̱ ĭntĕrĕstĭṉg. Whĕn ȧ märsh ĭs̱ sō ĭnŭndātĕd ŧhăt ŧhĕ fa̤llĕn mŏss, blādes̱ ŏf ḡrȧss, lēaves̱ ŏf trēes̱, twĭḡs̱, stĭcks, ănd ŧhĕ līke, ăt onçe bēɛȯme sătūrātĕd wĭŧh wa̤tĕr ănd äre kĕpt, ăt ȧ lōw tĕmpĕrȧtūre, frŏm ȧ frēe ăɛçĕss ŏf āir, ŧhĕ prōçĕss ŏf dēɛāy ĭs̱ ōnlў pärṭiȧl. In făɛt, ŧhĕ rĕtrōḡrāde mĕtȧmōrphōsĭs ŏf ŧhĕ vĕġĕtȧble sŭbstȧnçĕs̱ ŧhăt ḡōes̱ ŏn ŭndĕr ŧhēs̱e çĭrɛŭmstȧnçĕs̱ rēsŭlts ĭn prŏdŭɛts ŧhăt rēs̱ĭst dēɛāy. Hĕnçe, ŧhe̱y ăɛɛūmūlāte. In ŧhĭs wāy ĭs̱ fōrmed ĕvĕrў pēat märsh. Hĕnçe wē sēe ŧhăt pēat märshĕs̱ ɛăn ōnlў bē fōrmed ĭn lōw, lĕvĕl plāçĕs̱, ĭn whĭɛh "strēams̱ bēɛȯme ŏbstrŭɛtĕd ănd fōrm swa̤mps; ōr ĭn bāys̱ ănd ĭnlĕts ŏf sa̤lt wa̤tĕr, whĕre ŧhĕ

ĕbb ănd flōw ŏf ŧhĕ tīde kēeps ŧhĕ soil ɛŏnstȧntlў wĕt."

Eṉglĭshtown ĭs̱ ăn ōld vĭllāġe. Līke Rĭnḡōs̱, ĭt ĭs̱ one ŏf ŧhĕ ōldĕst sĕttlemĕnts ĭn ŧhĕ Stāte. In ĭt äre mănў ōld, ŭntĕnȧble, dīlăpīdātĕd buĭldĭṉgs̱ ŧhăt äre slōwlў fạllĭṉg tọ piēçĕs̱. Theẏ sēem tọ bē hous̱ĕs̱ ŏf yōre. Whȳ ŧheẏ hăve bēen lĕft stăndĭṉg tĭll ŧhĕ rọofs hăve fạllĕn ĭn, ŧhĕ sīdĭṉg hăs̱ rŏttĕd ŏff ănd ŧhĕ dōor-yärds̱ hăve ḡrōwn ŭp wĭŧh bụshĕs̱ ănd trēes̱, wē knōw nŏt. Wĭŧh ŧhĕ snŭḡlў buĭlt ănd nēatlў kĕpt dwĕllĭṉg ŧhăt sȯmetīmes̱ stănds̱ nēar bȳ, ŧheẏ ɛŏntrăst strŏṉglў.

Eṉglĭshtown hăs̱ ȧ pŏpūlāṭiȯn ŏf ȧbout 400. It ĭs̱ buĭlt māinlў ŭpŏn twọ strēets ŧhăt ɛrŏss ēaɛh ȯŧhĕr ăt rīght ăṉḡles̱. In ĭt ĭs̱ ȧ Mĕŧhōdĭst ɛhŭrɛh, ȧ Prĕsbȳtērīȧn ɛhŭrɛh, ŧhrēe stōres, ȧ drŭḡ stōre, ȧ hărnĕss shŏp, ŧhrēe whēelwrīght shŏps, twọ smĭŧh shŏps ănd one flour mĭll. Thĕ çĭtīzĕns̱ ŏf ŧhĭs vĭllāġe äre ĭntĕllĭġĕnt, ĕntĕrprīs̱ĭṉg ănd pōlīte. Hēre ĭs̱ dȯne, fōr ȧ vĭllāġe ŏf ĭts sīze, ȧ lärġe ȧmount ŏf trāde.

At e̱ight ō'ɛlŏck, P. M., wē pĭtɛhed our

tĕnts ĭn thĕ wo͝ods ĭn whĭch a pärt ŏf thĕ Amĕrĭcan ärmў was quärtĕrĕd dūrĭng thĕ nĭght bĕfōre thĕ bättle ŏf Mŏnmouth. It ĭs a beaūtĭfu͝l grōve ŏf härd wo͝od, ănd ĭs a plĕasant plāçe fōr ăn ĕncămpmĕnt. Upŏn thĭs clăssĭc ground, mănў ŏf thĕ stūdĕnts to͝ok their fĭrst lĕsson ĭn tĕnt buĭldĭng. Fōr, thĕ yo͝ungĕr ones, ŭntĭl thĭs ēvĕnĭng, knew nŏthĭng about tĕnt lĭfe. Howĕvĕr, ĭn a shōrt tĭme our tĕnts wĕre pĭtched, our blănkĕts sprĕad, ănd wē wĕre rĕadў to rētīre. Bŭt, jŭst thĕn thĕ lādiēs called to tēa. Around thĕ lŏng täble wē ăssĕmbled; ănd, wĭth thăt çĕrēmōnĭoŭs dēcōrŭm pēculĭăr to thĕ Acadĕmĭes ŭpŏn a sçĭĕntĭfĭc to͝ur, wē āte sŭch ăs was "sĕt bēfōre ŭs, ăskĭng nō quĕstĭons." Our ăppētites wĕre kēen; ănd wē āte wĭth a rĕlĭsh. As wē āte, spärks ŏf wĭt, gŭshĕs ŏf hūmor, hĭstŏrĭc ănĕcdōtes, phĭlōsŏphĭc rēflĕctĭons ănd prăctĭc ŏbsĕrvātĭons ăsçĕndĕd frŏm thĕ vărĭoŭs pärts ŏf thĕ çĭrcle, ănd mādc thĕ tĭme pass plĕasantlў ănd prŏfĭtablў. Nō one cŏmplāined ŏf hĭs new hōme; bŭt, ĕvĕrў one sēemed to bē ĕarnĕstlў ĭn quĕst ŏf slēep, ănd dēsĭroŭs thăt hē ōr shē should rĭse ĕarlў ŭpŏn thĕ fŏllōwĭng mōrnĭng.

As I wĕnt thro thĕ tĕnts frŏm tĭme to tĭme,

dūrĭng thĕ nĭght, all wĕre slēepĭng soundlў, ănd mănў wĕrĕ snōrĭng lŭstĭlў. A bĕd ŭpŏn thĕ ground ĭs thĕ plāçe fōr slēep.

It ĭs now fĭve ō'clŏck, A. M. Thĕ mōrnĭng dawns plĕasantlў. Thĕ āir ĭs balmў, ănd thĕ skў sērēne. At thĕ breāk ŏf dāy, thĕ mātĭn sĭgnal was gĭvĕn. Thĕ stūdĕnts ărōse ănd prōçēdĕd tọ thĕ busĭnĕss ŏf thĕ mōrnĭng. At fĭve ō'clŏck brĕakfast was rĕadў, ănd wĭth ăccădĕmĭc çĕrēmōnĭes, wē ăssĕmbled ăround thĕ lŏng tāble. As a rūle, wĭth stūdĕnts, thĕre ĭs nŏt a crāvĭng ăppētīte fōr thĕ mōrnĭng mēal. Bŭt, ŏn thĭs ŏccāsĭon, thĕ vōrāçioŭsnĕss was sŭch ăs chărăctĕrīze thĕ wọodchŏppĕr ĭn ĕarlў wĭntĕr. In a few mĭnūtes thĕre dĭsăppēared a gọodlў quăntĭtў ŏf boiled hăm, boiled ĕggs, chēese, brĕad, cāke ănd cŏffēe. All sēemed tọ bē ĭn thĕ ĕnjoyмĕnt ŏf pĕrfĕct hĕalth, ănd all wĕre ĭnclĭned tọ tălk frēelў. As wē āte, mănў wĕre thĕ cŏmmĕnts ŭpŏn thĕ classĭc ground ŭpŏn whĭch wē hăd spĕnt thĕ nĭght, ănd ŏf thĕ hērōĭc dēeds ŏf thōse who, one hŭndrĕd ănd sĭx yēars āgō ŏccūpĭed thĕ spŏt ŏn whĭch wē wĕre thĕn brĕakfastĭng.

Old Church on the Battlefield.

In sight, and about 300 yards away, stands that antique old church building that was used as a hospital during the battle. From this site, it appears picturesque and inviting. The white gravestones that are in the yard that surround it show conspicuously, and give to the prospect an appearance of solemnity. Our students are restlessly waiting an opportunity to visit it.

Squan Beach,
5 A. M., June 23, 1882.

After breakfast, we visited the old church and closely inspected it. With its appearance and its environments the students were

mŭch dēlīghtĕd. Dūrĭng thĕ bättle thĭs chŭrch wąs ūsed ăs ą hŏspĭtąl. It stănds ŭpŏn ăn ĕmīnĕnçe bȳ ăn ăncĭĕnt grāveyärd ĭn whĭch, nēar thĕ chŭrch, ĭs ą nŭmbĕr ŏf lärge fŏrĕst trēes. Thĕ buĭldĭng hăs ăn ăntĭque ănd vĕnĕrąble ăppēarançe. It ĭs buĭlt ŏf wọod, ĭs twọ stōries hīgh, ĭs shĭngled frŏm thĕ pēak ŏf thĕ rọof tọ thĕ foundāțiọn, ănd hăs ą spīre. It ĭs ĕntĕrĕd ŭpŏn thĕ south sīde, bȳ thrēe dōors. Of thēse, thĕ çĕntrąl ĭs thĕ lärgĕst. Thĕ dōors swĭng ŭpŏn hĭngĕs thăt hăve ăn ăntĭque ăppēarançe. They äre sĭmĭlär tọ sŭch ăs äre now ūsed tọ swĭng gātes ănd bärn dōors. Each cŏnsĭsts ŏf ą lärge īrọn "họok," drĭvĕn ĭntọ thĕ dōor-pōsts, frŏm whĭch ĕxtĕnds ą broąd ănd strŏng "străp" thăt rēaches ĕntīrelў ącrŏss thĕ dōor. They äre fąstĕned tọ thĕ dōor bȳ mēans ŏf lärge wrŏught nāils. I hăve nō dọubt thăt thōse họoks, străps ănd nāils wĕre mādc bȳ sọme blăcksmĭth thăt, ĭn ōldĕn tīmes, lĭved nēar thĕ chŭrch.

Whĕn ōpĕned, thēse dōors swĭng outwărd ŭntĭl they rĕst ągāinst thĕ sīde ŏf thĕ họuse—ăs dọ thĕ dōors ŏf bärns.

Thĕ çĕntrąl dōor ĭs fąstĕned bȳ mēans ŏf ą hūge ōld-tīme lŏck,—thĕ ĭdĕntĭcąl one thăt

wa̤s̱ plāçed̄ ŭpŏn ĭt whĕn ŧhĕ buĭldĭṉg wa̤s̱ ērĕ€tĕd. Thĕ kēy ŧhăt mănĭpūlātes ŧhĭs lŏck ĭs̱ pŏndĕroŭs ănd €ūrĭoŭs.

Thĕ lăte€hĕs ŭpŏn ŧhĕ sīde dōors̱ äre sŭe€h ăs̱ ŧhĕ blăcksmĭŧh mākes fōr bärn dōors̱, ḡärdĕn ḡātes, ănd ŧhĕ līke. Eae€h €ŏnsĭsts ŏf ȧ lärġe străp ŏf īrȯn fȧstĕned to̤ ŧhĕ dōor ăt one ĕnd, bȳ mēans̱ ŏf ȧ lārġe wrŏught nāil; ŧhĕ ȯŧhĕr ĕnd fa̤llĭṉg ĭnto̤ ŧhĕ nŏte€h ŏf ȧ họok drĭvĕn ĭnto̤ ŧhĕ dōor-pōst.

Thĕ buĭldĭṉg ĭs̱ līghtĕd bȳ mēans̱ ŏf two̤ rōws̱ ŏf wĭndōws̱, ĕxtĕndĭṉg quīte ăro€und ŧhĕ ho€use. Thēs̱e äre sma̤ll ănd ănḡūlȧr. Thĕ săshĕs̱ äre, ĭn ĕvĕrȳ pȧrtĭ€ūlȧr, ăntïque. Thĕ pānes̱ ŏf ḡlȧss äre sma̤ll—ŧhĕ ōld-tīme "sĕvĕn bȳ nīne."

Thĕ pṳlpĭt ĭs̱ ŏppōs̱ĭte ŧhĕ dōor. It ĭs̱ ŭnūs̱ūȧllȳ hīgh, ănd ŏf ŧhăt äre€hītĕ€tūre pē€ūlĭȧr to̤ ŧhĕ €hŭre€hĕs̱ ŏf one hŭndrĕd ănd fĭftȳ yēars̱ ȧḡō. Its ăpprōae€h ĭs̱ ȧ nărrōw, wīndĭṉg stāirs̱, ărtĭstĭ€ ănd nēat.

Bēsīde ŧhĕ pṳlpĭt ĭs̱ ȧ tăblĕt ŏn whĭ€h ĭs̱ ĭnse€rībed ŧhĕ ĕpītăph ŏf Rĕv. Wm. Tĕnnĕt, ănd ŧhăt ŏf Rĕv. Jŏhn Wo̤odhŭll, D. D.

Thĕ sēats äre pē€ūlĭȧr. Thĕ băcks äre vĕrtĭ€ȧl ănd vĕrȳ hīgh. The̱y äre, ĭn ĕvĕrȳ păr-

tĭcūlȧr, ōld-tīme sēats; bŭt ŧhe̱y äre ĭn ŧhĕ bĕst ŏf rēpāir. Upŏn ŧhĕ băck ŏf one ŏf ŧhēs̱e sēats, ŭntĭl ȧ few yēars̱ ȧḡō, wạs̱ plāinlў sēen ŧhĕ prĭnt ŏf ȧ măn's̱ hănd. Thĭs prĭnt wạs̱ ĭn blọod, ănd wạs̱ māde bȳ ȧ dȳĭṉg sōldịĕr. In hĭs̱ ăḡōnў, tọ̤ chānġe hĭs̱ pōs̱ĭṭiȯn, hē plāçeđ hĭs̱ blọodў hănd ŭpŏn ŧhĕ băck ŏf ŧhĕ sēat. Thĕ ĭmprĭnt ŏf hĭs̱ hănd wạs̱ fōrmed, ănd rēmāined ăs̱ ȧ mēmĕntō ŏf ŧhōs̱e dāys̱ whĕn our ănçĕstȯrs̱ wĕre strŭḡḡlĭṉg fōr ĭndēpĕndĕnçe.

Dūrĭṉg ŧhĕ băttle, sȯme ŏf ŧhĕ ḡrāve stōnes̱ wĕre brōkĕn bȳ cănnŏn bạlls̱. Thĕ frăḡmĕnts ŏf ŧhēs̱e stōnes̱—brōkĕn mōre ŧhăn ȧ hŭndrĕd yēars̱ ȧḡō—now līe whĕre ŧhe̱y fĕll.

Evĕrўŧhĭṉg ȧbout ŧhĕ vĕnĕrȧble ĕdīfĭçe ĭs̱ ĭn ăn ĕxçĕllĕnt stāte ŏf prĕs̱ĕrvāṭiȯn. Indēed, ĭt sēems̱ ŧhăt bȳ ȧ wīs̱e Prŏvīdĕnçe, ŧhĭs ĕdīfĭçe, ănd ĭts ĕnvīrŏnmĕnts, äre ĭn ŧhĕ hănds̱ ŏf ŧhōs̱e whọ̤ ăpprēçĭāte ŧhĕ sācrĕdnĕss ŏf ŧhĕ spŏt, ănd whọ̤ dēlīght ĭn kēepĭṉg ŧhĭṉgs ăs̱ ŧhe̱y wĕre. Wē ĕnjoy ŧhĕ vĭsĭt tọ̤ ŧhĭs sācrĕd plāçe; ănd wē ădmīre ănd rēspĕct ŧhōs̱e whọ̤ sō dĭlīġĕntlў hăve prēs̱ĕrved ĭt ĭn ĭts ĭntĕḡrītў. As̱ wē plāçe our hănds̱ ŭpŏn ŧhēs̱e sācrĕd lătchĕs̱, ŧhĕre ărīs̱ĕs̱ ăn ēmōṭiȯn ŧhăt ĭs̱ knōwn ōnlў tọ̤ ŧhōs̱e whọ̤ vĭs̱ĭt sŭch hăllōwed

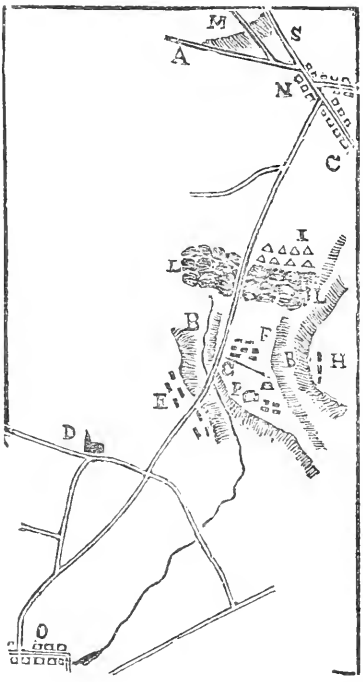
grounds, and contemplate such sacred things. In handling these venerable objects, we seem to be clasping the hands of those old worthies who formed them; and, by so doing, we seem to link the present with the past.

The church edifice that I have just described is very old. Yet, it is not the original First Presbyterian Church of Freehold. The primordial edifice stood near where the present one now is. It was built about 151 years ago. Mr. R. P. Craig, the present sexton of the church—a descendant of the Craig family who were most instrumental in building it—informs me that the grant to build the primordial church was obtained in 1727; that the edifice was erected in 1730; and that the preaching began in it in April, 1731. He also informs us that, at present there are, of this church, about four hundred members.

This church has been served by some of the most distinguished men in the Presbyterian denomination. Here the devout Tennents preached—the father and the son. Here preached the pious David Brainard, the zealous Whitefield and the learned John Woodhull.

Hēre, ŭndĕr Jŏhn Wo͝odhŭll, D. D., prĭŏr to͝ thĕ ĕstăblĭshmĕnt ŏf thĕ Thēōlŏgĭc Sĕmĭnārў ăt Prĭnçĕtŏn, wĕre ĕdūcātĕd ĭn thēōlōgў, sĕvĕrăl dĭstĭnguĭshed ĕlĕrgўmĕn. Amŏng thēse was our lāte vĭllāgĕr, thĕ Rĕv. Jāc͝ŏb Kĭrkpătrĭck, D. D.

In thĕ grāve yärd whĭch ĕnvĭrons thĕ ōld buĭldĭng hăs bēen ĭntĕrred thĕ bŏdĭes ŏf mănў ōld wŏrthĭes. Hēre was dēpŏsĭtĕd thĕ bŏdў ŏf Gĕn. Dāvĭd Fōrmăn, Rĕv. Jŏhn Wo͝odhŭll, Rĕv. Wĭllĭam Tĕnnĕt ănd ŏthĕrs bŭt lĭttle lĕss dĭstĭnguĭshed. Wĭthĭn sĭx fēet ŏf thĕ wĕst ĕnd ŏf thĕ chŭrch ĭs thĕ grāve ŏf Cŏlōnĕl Mŏnetŏn, a Brĭtĭsh ŏffĭçĕr, who fĕll bў a mŭskĕt ball whĭle mākĭng a chärge ŭpŏn thĕ fōrçĕs ŭndĕr Gĕn. Wāyne. Thĕ spŏt ĭs märkĕd bў a bōard,—plăntĕd thĕre bў sŏme Englĭsh gĕntlĕmăn who vĭsĭtĕd thĕ grāve ĭn 1876.



PLAN OF THE BATTLEFIELD OF MONMOUTH.

Dūrĭng thĕ mōrnĭng, wē vĭsĭtĕd thĕ sĕvĕrăl sītes ŭpŏn whĭch ŏccŭrred thĕ māin ĕngāgemĕnts dūrĭng thĕ bättle. Wē nōtĕd thĕ spŏt ăt whĭch Wăshĭngtŏn mĕt Lēe ĭn thĕ mĕmōrable rētrēat; ălsō, thĕ spŏt whĕre thĕ găllănt Cŏl. Bŭnnĕr fĕll; ălsō whĕre fĕll thĕ lāmĕntĕd Mājŏr Dĭckĭnsŏn; ălsō thĕ spŏt whĕre fĕll thĕ Brĭtĭsh ŏffĭcĕr, Cŏl. Mŏnctŏn.

At 7½ o'clock, we visited the marl-pit, on the south side of the road near Freehold. This pit is now yielding marl and is in excellent condition for study. Here, the students listened to a short lecture on the Marl Formation, and on the peculiarity of the stratum in which this pit is, and on the plan on which this pit is worked.

When the students had provided themselves with specimens of the marl of this pit, we directed our course towards Freehold, the County seat of Monmouth County. We entered this beautiful village about 9 o'clock, A. M.

Along the main avenue that leads to the public buildings, we carefully and critically surveyed each object until we arrived at the Court House. As this was an object of special interest to us, we dismounted and began a general survey of its several apartments and its accessories.

Our first attention was given to those parts that are in charge of the Sheriff. As the Sheriff was not in, we were escorted thru by his deputy. Everything relating to the court room is elegant, spacious and convenient. The

ăpärtmĕnts fōr ŧhĕ Shĕrĭff's fămīlў äre ĕxquĭs̱ĭte.

As̱ wē wĭsheđ to̤ view ŧhĕ jāil ănd ĭts ăcçĕssōrĭes, ŧhĕ dĕpūtў pȧsseđ ŭs ŧhro̤ ŧhĕ cōurt house ĭnto̤ ȧ băck yärd, wĭŧh hīgh fĕnçĕs̱, ĭn whĭch stănds̱ ŧhĕ jāil buĭldĭṉg. Evĕrўŧhĭṉg hēre prēs̱ĕntĕd ŧhĕ ăppēarȧnçe ŏf sēcūrĭtў. Thĕ jāil buĭldĭṉg ĭs̱ ȧ mȧssĭve ŧhrēe-stōrў strŭctūre, buĭlt ŏf brĭck. Its ärchītĕctūre ĭs̱ mŏdĕrn. Strĕṉgŧh, dūrȧbĭlĭtў, cŏnvēnịĕnçe ănd sēcūrĭtў äre dĭsplāyed ĭn ĕvĕrў pärt. Alŧhō ŧhĕ buĭldĭṉg ĭs̱ wĕll prōpōrṭiȯned, ănd ĕvĕrўŧhĭṉg ȧbout ĭt ĭs̱ nēat, yĕt ĭts ăppēarȧnçe ălōne ĭs̱ ēnọugh to̤ tĕrrĭfў. At one ĕnd ĭs̱ ȧ spāçioŭs, bŭt ḡlo̤omў īrȯn dōored ha̤ll, frŏm whĭch lēad ŧhĕ cŏrrīdōrs̱ to̤ ŧhĕ vārĭoŭs pärts ŏf ŧhĕ jāil. Upŏn ĕntĕrĭṉg ŧhĭs, ȧ fēelĭṉg ĭs̱ ĕxpērĭĕnçeđ ŧhăt ĭs̱ ēas̱ĭĕr ĭmăġĭned ŧhăn dēscrībed.

Into̤ ŧhĭs ha̤ll, ŧhĕ dĕpūtў ĕscōrtĕd ŭs. Hēre wē ḡāzed ŭntĭl wē hăd prĕttў clōselў sŭrve̱yed ĭt, ănd ĭts ăppŭrtēnȧnçĕs̱. Thĕnçe hē lĕd ŭs ŧhro̤ ŧhĕ ḡlo̤omў cŏrrīdōr, whĭch ĭs̱ ŧhĕ pȧŧh trăvĕled bў ĕvĕrў cŭlprĭt ŧhăt ĭs̱ ĭnĕärçĕrātĕd ĭn ŧhĭs prĭs̱ȯn. Whīle stăndĭṉg ăt ŧhĕ īrȯn ḡāte, hē tōld ŭs ŧhăt cōurt hăd jŭst adjọurned,

ănd, ŧhăt ŧhĕ ɛrĭmĭnȧls̱ sĕntĕnçeđ to̤ stāte prĭs̱ȯn hăd nŏt yĕt bēen tākĕn ȧwāy; ŧhăt twĕntў-nīne ɛrĭmĭnȧls̱ wĕre ŧhĕ ĭnmātes ŏf ŧhĕ jāil; ănd ŧhăt ăt ŧhăt hour ŧhĕ çĕlls̱ wĕre ōpĕn, ănd ŧhĕ prĭs̱ȯnĕrs̱ wĕre tākĭṉg ĕxĕrçīs̱e ĭn ŧhĕ ha̤ll whĭɛh fōrms̱ ŧhĕ jāil ro̤om.

Thĭs jāil ro̤om ĭs̱ pēɛūlĭȧr. Exçĕptĭṉg ŧhĕ ha̤ll ăt ŧhĕ ĕntrȧnçe, ănd ŧhĕ spāçe ōvĕr ĭt, ĭt ɛŏnsĭsts ŏf ŧhĕ fĭrst flōor ŏf ŧhĕ ĕntīre buĭldĭṉg. Of ŧhĭs ro̤om, ŧhĕ çēilĭṉg ĭs̱ vĕrў hīgh, ănd ŧhĕ wĭndōws̱ quīte nărrōw. In ŧhĕ çĕntĕr ŏf ŧhĕ prĭs̱ȯn ĭs̱ buĭlt ŭp ȧ dūrȧble strŭɛtūre ŏf brĭck, hīgh ēnoŭgh fōr ŧhrēe stōrĭes̱; ănd wīde ēnoŭgh fōr two̤ tiērs̱ ŏf çĕlls̱. Around ŧhĕ sĕɛȯnd ănd ŧhĭrd stōrĭes̱ ŏf ŧhĭs strŭɛtūre, ŏn ŧhrēe sīdes̱ ĭs̱ ăn īrȯn ɛŏrrīdȯr, rēaɛheđ bў ȧ flīght ŏf stāirs, buĭlt ŏf īrȯn. Frŏm ŧhĭs ɛŏrrīdȯr, ēaɛh çĕll ĭn ēaɛh stōrў ĭs̱ ĕntĕred,—ăs̱ ŧhĕ çĕlls̱ ŏf ȧ pĭġeȯn house äre ĕntĕred frŏm ŧhĕ pōrɛhĕs̱ ŧhăt skĭrt ĭts sīdes̱. Thĕ çĕlls̱ ŏf ŧhĕ fĭrst stōrў äre ĕntĕred frŏm ŧhĕ flōor ŏf ŧhĕ prĭs̱ȯn. Indēed, ŧhĭs ĭs̱ ȧ kīnd ŏf ɛŏlŭmbărĭŭm.

Thĕ spāçe bētwēen ŧhĭs ɛŏlŭmbărĭŭm ănd ŧhĕ wa̤lls̱ ŏf ŧhĕ prĭs̱ȯn ĭs̱ ămple, ănd wĕll vĕntĭlātĕd.

Whīle lo̤okĭṉg ŧhro̤ ŧhĕ īrȯn ḡrātes, ŧhĕ

dĕpūtў ȧsked ŭs whĕthĕr wē wĭshed to̤ ḡō ĭn ănd view thĕ çĕlls̱, &c., &c. Upŏn bēĭṉg ĭnfōrmed thăt wē wĭshed to̤ do̤ sō, hē pȧssed ŭs thro̤ thĕ īrȯn dōor ĭnto̤ thĕ dĭs̱mȧl dĕn ĭn whĭch äre tŭrned thĕ nōtĕd fiēnds̱ ŏf Mŏnmoŭth. As̱ hē tŭrned ŭs ĭn, hē, ŏf cōurse, stāyed ŭpŏn thĕ outsīde ŏf thĕ dōor. Instȧntlў wē bēḡăn to̤ sŭrve̱y ănd scăn thĕ ĭnmātes. The̱y wĕre nēithĕr hăndsȯme nŏr ăgrēeȧble. Of thēs̱e twĕntў-nīne cŏnvĭcts, thĕre wạs̱ nŏt one who̤ hăd ȧ tŏlĕrȧble countēnȧnçe. Sȯme prēs̱ĕntĕd fāçĕs̱ ăs̱ crṳĕl ăs̱ I ĕvĕr sŭrve̱yed. Sȯme lo̤oked ăs̱ fiērçe, ănd ăs̱ fĕlŏnoŭs ăs̱ thĕ ärch-fiēnd dēscrībed ĭn Părȧdīse Lŏst, whīle nŏt one hăd ȧ fāçe mōre ĭnvītĭṉg thăn thĕ săvāġĕs̱ ŏf Austrālĭȧ.

As̱ wē pȧssed ĭnto̤ thĕ ḡlo̤omў dŭnġeȯn, wē hĕard thĕ hĕavў īrȯn dōor clōs̱e bēhīnd ŭs ănd thĕ clăṉg ŏf thĕ hĕavў bōlts. Wē wĕre now tŭrned ĭn ănd lŏcked ŭp wĭth thĕ cŏnvĭcted fĕlȯns̱. Thĭs wạs̱ ȧ sĭtūāṭiȯn new to̤ ŭs; ănd, ĭt brŏught ŭp trāins̱ ŏf thŏught nĕvĕr ăwākĕned bēfōre. Ovĕr thĕ fāçe ŏf ēach one ȧ păllȯr cȧme nĕvĕr sēen bēfōre. Fōr, ăs̱ so̤on ăs̱ wē rēălīzed thăt wē hăd bēen tŭrned ĭnto̤ thĭs jāil ălōne, ănd wĭthout thĕ mēans̱ ŏf dēfĕnçe,

to surveyed the dismal scene that were the habitations of these fiends, alarm quickly passed over all; and it was appárent in every face.

As we passed in, near by the door were about twenty, so closely huddled up that the deputy had to order them away before he durst open the pandemonium to let us in. It was evident that the deputy dreaded to deal with these convicts. It was also plain that to this portion of the prisoners, we were not a welcome guest; and surely we were getting a cold and an indignant reception. Upon us, at once were turned the stare, or flash, of those eyes that would almost curdle the blood in the veins of a cat. Indignation and impudence flashed from every countenance. Some with eyes not more pleasant than those of a blacksnake or an alligator, stepped up to us too close to be agreeable. But, to their language and their demonstrations we paid but little attention. The pupils, as they had passed through the door, stood close together, awaiting orders. It was not difficult to see that they realized where they were, and that they were ill at ease.

In the gloom of the back part of the room

wạs̱ ȧ bĕvў ŏf ɛŏnvĭɛts sēatĕd ăro-und ăn ōld plăṉk tāble plāyĭṉg ăt ɛärds̱. Our ădvĕnt ăttrăɛtĕd ŧhe̱ir ăttĕnṭiȯn. Tōwärd ŭs, ĕvĕrў fāçe wạs̱ tŭrned. One, wĭŧh hĭs̱ ĕlbōw ŭpŏn ŧhĕ tāble ănd cärds̱ ĭn hĭs̱ ĕlēvātĕd hănd, stāred ăt ŭs ĭn ȧmāzemĕnt. Thĕ ŭndĕr ja̤w ŏf ănȯŧhĕr fĕll sō lōw ŧhăt one ɛọuld a̤lmōst sēe whăt hē hăd hăd fōr brĕakfȧst. Anȯŧhĕr whōs̱e fiēndĭsh vīsāġe sēemed to̤ a̤lmōst părȧlȳze ănў one who̤ lọoked ăt hĭm stāred ăt ŭs ĭn ĭndĭg̅nȧnt vĕng̅ĕançe. Nŏt ăn ā g̅rēeȧble fāçe wạs̱ to̤ bē sēen.

Hēreŭpŏn, to̤ ŧhĕ stūdĕnts ŧhĕ ōrdĕr, "Fīle ŏff," wạs g̅ĭvĕn, ănd ĭn ăn ĭnstȧnt ŧhe̱y wĕre ĭn līne ăs̱ ōrdĕrlў ăs̱ ŧhō ŧhe̱y wĕre ĭn ȧ sɛho̤ol ro̤om. Thĕ ăppēarȧnçe ŏf our pärtў wäs̱ now vĕrў dĭffĕrĕnt; ănd ĭt hăd ĭts ĭnflṳĕnçe ŭpŏn ŧhĕ jāil bĭrds̱, to̤o. At onçe ŧhĕre wạs̱ ȧ dĭffĕrĕnt ĕxprĕssịȯn ŭpŏn ŧhĕ fāçe ŏf ŧhĕ prĭs̱ȯnĕrs̱. The̱ir ɛūrĭŏsītў sēemed ăro-us̱ed, ănd ĕvĕrў one sēemed ĭn ȧ quăndȧrў. Thĕ prōçĕssịȯn ŏf tēaɛhĕrs̱ ănd stūdĕnts mo̤ved dīrĕɛtlў tōwärd ŧhĕ ōld tāble ăro-und whĭɛh ŧhĕ ɛärd plāyĕrs̱ wĕre sēatĕd. Bŭt, ēre wē hăd rēaɛhed ŧhĕ tāble, ŧhĕre wạs̱ nŏt one sĭttĭṉg ŧhĕre. A quĭck sɛămpĕrĭṉg frŏm ŧhe̱ir sēats fŏllōwed,—ēaɛh one g̅ōĭṉg hĭs̱ ōwn wāy ăs̱

răpĭdlў ăs̱ pŏssīblĕ. Hăd wē bēen à bănd ŏf cŏnstàbles̱ ăttĕmptĭṉg to̤ ărrĕst them fōr sòme he̱inoŭs crīme, thĕre wo̤uld nŏt hăve bēen ḡreātĕr skēdăddlĭṉg. Thro̤ thĕ greāt cŏrrīdōrs̱ the̱y răn, ōr hĭd thĕmsĕlves̱ bēhīnd thĕ cŏlŭmbărĭŭm. As̱ sūpple ăs̱ à mŏnkeў, one ăsçĕndĕd thĕ īròn frāme-wòrk thăt cŏnstītūtes thĕ pōrchĕs̱ ăround thĕ cŏlŭmbărĭŭm, ănd dĭsăppēared ĭn hĭs̱ çĕll. Othĕrs̱ fŏllōwed quĭcklў. Thĭs pärt ŏf thĕ scēne wa̤s̱ àmūs̱ĭṉg, ănd prōvōked ŭpŏn sòme à smĭle; o̤thĕrs̱ lōs̱ĭṉg the̱ir ḡrăvĭtў, la̤ughed rĭght out. It rēmīndĕd ŭs ŏf thĕ mŏnkeўs̱ ăsçĕndĭṉg the sīdēs̱ ŏf thĕ cāge cŏntāinĭṉg thĕ hăppў fămĭlў ăt Bärnŭm's̱ Mūs̱ēŭm.

Sŭrve̱yĭṉg ēach pärt clōselў, wē wälked thro̤ thĕ broa̤d brĭck pāved cŏrrīdòr ănd ăsçĕndĕd thĕ stairs̱, to̤ view thĕ pōrchĕs̱ ănd thĕ çĕlls̱ thăt fōrm thĕ cŏlŭmbărĭŭm. Slōwly wē mōved ălŏṉg thĕ pōrchĕs̱, ĕntĕred mănў ŏf thĕ çĕlls̱ ănd crĭtĭcàllў ĕxămĭned çĕlls̱ ănd çĕll fṳrnītūre. Mēan whīle, frŏm bēlōw ăsçĕndĕd thĕ voiçĕs̱ ŏf thōs̱e hŏrrĭd fĕlōns̱. The̱ir cŏmmĕnts wĕre bў nō mēans̱ pŏlĭshed ōr pīoŭs. Bŭt, ĭn thĕ māin thĕ nātūre ŏf the̱ir dĭscōurse wa̤s̱ răthĕr jŏcūlàr.

As soon as the clatter of our feet upon the porch of the third story was heard, the prisoners who had so nimbly climbed the iron frame work to escape our view, now as nimbly threw themselves over the banister of the third story porch and descended the iron frame work to the floor of the prison. So dexterous were their movements, and with such earnestness was the descent made, that none of our party failed to enjoy a hearty laugh.

Hereupon things took a decided change. A few huddled together directly, —appearently to inquire of one of the fellows who had descended from the third story, who the visitors were. He replied: "Be God! its a Sunday school with their preacher." So distinctly was this conversation heard, and so ludicrous did they seem to act, that each one of our party, for the time, lost his dignity, and was convulsed with laughter.

But, our laughter was of short duration. From below, thro the great resounding corridors, in the most melodious strains, began to ascend voices so sweet, uttering words so unexpected, that we were at once enchanted. For

a mōmĕnt wē stood ĭn amāzemĕnt—sō still that ĭt was hardly certaĭn that wē breathed. A quartĕt ŏf thēse fiends struck ŭp that pièce ŏf mūsic, sō wĕll knōwn by the title, "Shall wē găther ăt the rĭvĕr," and sung ĭt with such swēetnĕss, and with such pāthŏs that one mīght thĭnk they had learned the strāin from the ăngĕls ĭn Hĕavĕn. From the sĕvĕral wĭndings, ŏff-sĕts, and cornĕrs ŏf the cŏrrĭdŏrs and gallĕrĭes the voices ĕchōed ĭn the swēetĕst mĕlōdy; and when they bēgăn the chōrŭs, ăppărĕntly, about tĕn wĕll trāined voices joined ĭn, and swĕlled the strāin ŭntĭl ĕvĕry mōlēcūle ŏf the prĭsŏn was rĕvĕrbĕrant with the swēetĕst and mōst heärt stĭrrĭng mūsic. The pièce I hăve hĕard sung by mănỳ a wĕll trāined choīr; bŭt, nĕvĕr bēfōre hăd I hĕard the sĕntīmĕnt sō wĕll brŏught out, nōr the mūsic sō wĕll rendĕrĕd. Indēed, one ŏf the fĕllōws who sō nĭmblỳ ăsçĕndĕd and dēsçĕndĕd the bălŭstrāde and pōsts ŏf the cŏlŭmbărĭŭm, sō făr ăs voice ĭs vălūed, would grāce almōst ănỳ choīr.

With this mūsic, wē wĕre ĕxçēedĭnglỳ dēlīghtĕd. Bŭt, jŭst hēre, among the stūdents bēgăn a trāin ŏf quĕstĭons—the lēading ones

ŏf whĭch äre: How ĭs ĭt thăt thēse fĕlȯnoŭs mĕn, wĭth such fiēndĭsh fāçĕs, hăve ĕvĕr hĕard ōr lĕarned thĭs beaūtĭfụl sŏng? How ĭs ĭt thăt sŭch scoundrĕls hăve sŭch eūphŏnĭc voiçĕs? How ĭs ĭt thăt mĕn whōse līves äre spĕnt ĭn crīme căn sō ăpprēçĭāte thĕ eūphŏnĭc ănd thĕ gọod ăs tọ trāin their voiçĕs tọ thĕ rĕndĕrĭng ŏf sŭch heärt-stĭrrĭng, sŭch Hĕavĕnwȧrd ĭnvītĭng mūsĭc?

Tọ Mr. T. V. Arrōwsmĭth, thĕ ăccŏmplĭshed clĕrk ŏf Mŏnmoŭth County, wē now pāid our rēspĕcts. Thĕ coŭrtēsy ŏf thĭs ĕldĕrly ġĕntlemȧn quĭcklȳ ăttrăctĕd thĕ ăttĕnṭiȯn ŏf bōth tēachĕrs ănd pūpĭls. Wĭth dĭgnītȳ ănd thăt grāçe thăt ĭs dēvĕlŏped ĭn ăn ăccŏmplĭshed ġĕntlemȧn bȳ lŏng cŏntĭnūȧnçe ĭn pŭblĭc sĕrvĭçe, hē shōwed ŭs thĕ vārĭoŭs ăppointmĕnts ŏf thĕ clĕrk's ŏffĭçe ănd thĕ clĕrk's lībrārȳ.

Whīle ĭn thĕ lībrārȳ, Mr. J. C. Arrōwsmĭth, sŏn ŏf thĕ clĕrk, shōwed ŭs sȯme ŏf thĕ vŏlūmes cŏntāinĭng thĕ rĕcōrds ŏf thĕ ĕarlĭĕst cōurts, ănd thĕ rĕcōrds ŏf thĕ prīmȧl dēeds. Sȯme ŏf thĕ dēeds wĕre Indĭȧn grănts ĭn

whĭch, thĕ Indĭans (bēĭng ŭnāble to̤ wrīte) ăttĕstĕd bȳ mākĭng ȧ crŏss, ōr ȯthĕr märk.

Amŏng thĕ dēçĭsịȯns ŏf thĕ prĭmītĭve cōurts, our ăttĕnṭiȯn wạs called to̤ ȧ sĕntĕnçe ŏf dĕăth ĭn thĕ cāse ŏf ȧ nēgrō who̤ wạs chärged wĭth thĕ mŭrdĕr ŏf ȧ wọmȧn nāmed Mārȳ Wrīght. It ăppēars frŏm thĕ rĕcōrd thăt thĕ nēgrō, wĭth thĕ dēsīgn ŏf gĕttĭng thĕ mŏneȳ thăt wạs ĭn hĕr pŏssĕssịȯn, kĭlled thĕ wọmȧn wĭth ȧ knīfe. Hē wạs trīed ĭn ȧ cōurt hĕld ăt Shrewsbŭrȳ, ŏn thĕ 23d, 24th ănd 25th ŏf Sĕptĕmbĕr, 1691; cŏnvĭctĕd ănd sĕntĕnçed to̤ dĕath.

In ōrdĕr to̤ shōw how our ḡọod ănçĕstȯrs dĕalt wĭth mălēfăctȯrs, I hēre ḡĭve ȧ vĕrbătĭm cŏpȳ ŏf thĕ sĕntĕnçe ŏf dĕath, ăs ĭt stănds ĭn thĕ vŏlūme ĭn whĭch thĕ rĕcōrd ŏf thĭs ănçiĕnt cōurt ĭs māde:

"Thĕrefōre thĕ cōurt dōth ădjŭdġe thăt thou, thĕ sāid Caēsȧr, shălt rētŭrn to̤ thĕ plāçe frŏm whĕnçe thou cāmest, ănd frŏm thĕnçĕ to̤ thĕ plāçe ŏf ĕxēcūṭiȯn, whĕre thȳ rīght hănd shălt bē cŭt ŏff ănd thrōwn ĭnto̤ thĕ fīre ănd bŭrned bēfōre thīne eȳes. Thĕn thou shălt bē hănged ŭp bȳ thĕ nĕck ŭntĭl thou ärt dĕad, dĕad, dĕad. Thĕn thou shălt bē cŭt down,

and burned to ashes in a fire. And so the Lord have mercy on thy soul, Caesar."

In this sentence, it seems to us, the language is strong enough to strike terror to the most obdurate heart; and the method of punishing the criminal, severe enough to terrify any malefactor.

By Mr. Arrowsmith, we were introduced to the Surrogate, who kindly showed us the library of the Orphans' Court.

The public buildings of Monmouth County are well located, handsomely built, imposing in appearance, and in all particulars, well arranged. Long will the students of the Academy remember the court house of Monmouth, and the philanthropic courtesy of the county officers.

After visiting the court house, we drove to all the principal streets of the village and viewed critically whatever seemed curious, or worthy of our attention. The place is regularly planned, well built, and richly ornamented with shade trees. The churches are large and tasteful. The stores are spacious

ănd wĕll stŏcked. Thĕ ärchĭtĕctūre ŏf thĕ dwĕllĭngs ĭs gọod, ănd ĭn mănў cāsĕs ĕxhĭbĭts ĕxqụĭsĭte tāste.

Thĕ lạwns ăbout mănў ŏf thĕ rĕsĭdĕnçĕs ạre lạrge, ănd ărrānged ăccŏrdĭng tọ thĕ bĕst prĭnçĭplĕs ŏf ärt.

Pärtẹrres ăre nūmĕroŭs, ănd thĕ wĭndōw cŭltūre ŏf flowĕrs ĭs bў nō mēans nĕglĕctĕd. Indēed, wē cạn sāy thăt Frēehōld ĭs ạ plāçe ŏf thrĭft ănd ŏf beaūty; ănd thăt hĕr çĭtĭzĕns ăre ĕntĕrprĭsĭng, pōlīte, coŭrtēoŭs ănd phĭlănthrŏpĭc.

Thĕ pōpūlātiọn ŏf thĕ plāçe ĭs 3500. In ĭt ăre sĭx chŭrchĕs: St. Pētĕr's Epĭscọpăl, M. Epĭscọpăl, Prĕsbўtērĭăn, Băptĭst, Rēfōrmed Dŭtch ănd Cāthōlĭc. Hēre ĭs ạ cŏnsĕrvătōrў ŏf mūsĭc ōf sọme nōte; ạlsō ạ gọod clăssĭcạl Acădēmў. Thĕ ĭndŭstrĭes ŏf thĕ ĭnhăbĭtạnts ăre mĕrcạntĭle ănd mănūfăcturĭng. Frēehōld ĭs thĕ çĕntre ŏf trāde fōr ăn ĕxtĕndĕd ănd wĕalthў ăgrĭcūltūrăl dĭstrĭct. Irọn ĭs ĕxtĕnsĭvelў mănūfăctŭred hēre; hēre, tọo, ĭs mādе mŭch ōrnāmĕntăl wŏrk.

Frēehōld sŭppōrts twọ gọod nẹws-pāpĕrs—thĕ Mŏnmoŭth Dĕmōcrăt ănd thĕ Mŏnmoŭth Rēpŭblĭcạn.

Around Frēchōld, the soil is a sandy lōam, easy of tillāge and very fertile. As a rule, it is divided into large farms. Thēse are well cultīvātĕd and prōdūce excellent crops of rye, wheat, corn, oats, hay and pōtātōes. As a fertilīzĕr, märl is freely ūsed. It is to this soil the fertilīzĕr. Where this fertilīzĕr is ūsed, the grōwth of rye is rēmärkable. In almōst any rye-field, a măn six feet tall can stand erect and tie the rye into a knot ōvĕr his head. To shōw the stūdents the excellency of the grōwth of this cērēal, while upon the battle ground of Mŏnmoŭth, I went into a rye field, and, standing erect, took in each hand a few stems of rye, bēlōw the ears, and tied them in a knot above my hĕad.

In Middlesex and in Mŏnmoŭth, rye is much more cultīvatĕd than it is in Hŭntĕrdon, Wärrĕn, Sŏmĕrsĕt, Morris, Sussex or Essex. As we passed along, the stūdents counted the fields of wheat and thōse of rye. From this "count," we learn that in Mŏnmoŭth and Middlesex, there are almōst as many fields of rye as of wheat.

CAMP BARNEGAT,
5 A. M., JUNE 24, 1882.

Thĕ mōrnĭn̲g da̤wns̲ beaūtĭfṳl. Thĕ āir ĭs̲ ꞓlēar ănd sȧlūbrĭoŭs. Thĕ lănd-wĭnd brēezĭn̲g frŏm ꞇhĕ ḡreāt fŏrĕst ŏf pīnes̲ ănd măḡnōlĭȧs̲ ĭs̲ fre̲ightĕd wĭꞇh ba̤lmy̆ ōdȯrs̲. Thĕ sŏn̲g bĭrds̲ äre mākĭn̲g ꞇhĕ wĕlkĭn rĭn̲g wĭꞇh ꞇhe̲ir mātĭn ꞓhōrŭs. Thĕ fĭsh ha̤wk, hīgh ŭp ĭn ꞇhĕ āir, ōvĕr ꞇhĕ sēa, ĭs̲ ġȳrātĭn̲g ḡrāçefṳlly̆. Thĕ ḡŭll ĭs̲ plȳĭn̲g hĭs̲ lāzy̆ wĭn̲gs̲. Thĕ lŏn̲g trāins̲ ŏf shōre bĭrds̲ a̤lmōst grāzĭn̲g ꞇhĕ sēa, sĕnd fōrꞇh ꞇhe̲ir shrĭll ꞓhĭrp ănd pȧss ŭs wĭꞇh ăstoundĭn̲g răpĭdīty̆. Mēanwhīle, ōld ōçeȧn çēasĕs̲ nŏt to̤ sĕnd fōrꞇh hĭs̲ a̤wfṳl mōan; ănd ꞇhĕ hĕavy̆ plṳnġĕs̲ ŏf ꞇhĕ bĭḡ wāves̲ dăshĭn̲g ŭpŏn ꞇhĕ strănd fĭll ꞇhĕ āir wĭꞇh nois̲ĕs̲ ꞇhăt ȧwākĕn ēmōṭiȯns̲ ŏf ꞇhĕ a̤wfṳl ănd ꞇhĕ sŭblīme.

Thĭs ĭs̲ ꞇhĕ hour fōr ꞇhĕ pĕnsĭve; ꞇhĭs ĭs̲ ꞇhĕ sēas̲ȯn fōr sŏlĕmn ꞇhŏught. At ꞇhĭs hour who̤ĕvĕr ꞓȧn ăpprēçĭāte ꞇhĕ beaūtīfṳl, ꞇhĕ sŭblīme, ꞇhĕ euphŏnĭꞓ, ꞇhĕ sŏlĕmn, fīnds̲ hĭs mīnd ăꞓtĭve, ĕvĕry̆ ēmōṭiȯn ărous̲ed ănd hĭs̲ ĕnjoymĕnt ăt ꞇhĕ ăꞓmē.

Wē hăve jŭst rētŭrned frŏm ꞇhĕ strănd to̤ our tĕnts. At da̤wn, wē ȧwōke ănd prōçēedĕd to̤ ꞇhĕ shōre to̤ wăteh ꞇhĕ rīs̲ĭn̲g sŭn. In ȧ

rōw, ŭpŏn a lĕdge ŏf sănd thăt cŏmmănds ăn ĕxtĕndĕd prŏspĕct ōvĕr thĕ sēa, wē wĕre sēatĕd. Cārefŭllў wē sŭrvęyed thĕ ēthērēal vąult, frŏm thĕ hōrīzon tǫ thĕ zēnĭth. All wąs sērēne, ĕxçĕptĭng thĕ ēast. Thĕrĕ, fōr thĕ spāçe ŏf 60° ĕxtĕndĕd hŏrīzŏntăllў a dĕnse strātŭs cloud. Thĭs ĭntĕrçĕptĕd our view ŏf thĕ ēmĕrgĭng sŭn ănd cast a slīght gląom ōvĕr our spĭrĭts. Bŭt, thĭs gląom wąs ĕvănĕsçĕnt. Our mātĭn vĭsĭt wąs stĭll frąught wĭth rĭchĕst prŏspĕcts. Upŏn thĕ cŏnvĕx sehēme, nēar ănd fär wĕre mănў a sāil. Hēre thĕ brēeze wăftĕd grāçefŭllў alŏng thĕ stātelў măn-ŏf-wăr; thĕre thĕ lŏng ōçeăn stēamĕr plĭed hĕr stĕadў wāy. Hēre thĕ slǫop sprĕads hĕr sāil tǫ cătch thĕ gĕntle brēeze; yŏndĕr thĕ fŭll rĭgged shĭp, thĕ wāves ŏf thĕ ōçeăn outrīdes. Fär ōvĕr thĕ cŏnvĕx sehēme, a găllănt shĭp dĭsplāys hĕr strēamĕr, bŭt hīdes hĕr rĭggĭng ănd hĕr hŭll; nēarĕr bў, flōats a bărk, thăt shōws hĕr sāils, bŭt hīdes hĕr dĕck.

Jŭst bēyŏnd thĕ hĭll ŏf thĕ ōçeăn sāils a shĭp whōse dĕck ănd rĭggĭng ăre sēen. Nēarĕr bў, ŭpŏn thĕ brīnў hĭll ĭs sēen a sāil whōse hŭll ănd rigggĭng ălīke ăppēar. Thŭs wąs dĭsplāyed thĕ grăndeūr, thĕ măjĕstў ănd thĕ

beaūtў ŏf ōçeăn bärks, ănd ĕverў phāse of thĕ cŏnvĕxĭtў ŏf thĕ ōçeăn sēen, ănd ĕvĕrў fēatūre ŏf ă nēar ōr dĭstănt shĭp stŭdĭed.

As thĕ āir ĭs clēar ŏf hāze, thĕ rānġe ŏf vĭsĭọn ĭs ĕxtĕndĕd. Fär dọwn thĕ bēach thĕ pĭēr ăt Asbŭrў Pärk ĭs sēen. Färthĕr ŏn, wē dēscrў thĕ pĭēr ăt Lŏng Brănch, ănd thĕ flăgs thăt wāve ōvĕr thĕ ġreāt hōtĕls thĕrĕăt. Nēarĕr bў, ŭpŏn thĕ strănd, ăppēars mănў ă cōzў cŏttāġe ănd mănў ă ġrănd hōtĕl. Up thĕ bēach, ăs fär ăs one căn sēe, ĕxtĕnds thĕ knōllў dụne. Pĕrhaps ŭpŏn thĭs ĕlēvāṭion, fär ĭn thĕ dĭstănçe, tọ cătch thĕ brēeze frŏm thĕ sēa, ōr thĕ lănd wĭnd, ĭs sēen lĭnes ŏf cŏttāġĕs, ĕmbrўŏnĭc vĭllāġĕs ănd ĭsōlātĕd hōtĕls.

As wē fāçeđ thĕ wĕst, strĕtchĭng out tọ thĕ lĭmĭts ŏf vĭsĭọn, ĕxtĕnd thĕ fŏrĕsts ŏf pīne ănd swąmps ŏf măgnōlĭă. Thŭs, vărīĕtў ŏf lănd-scāpe ĕntĕrtāins ănd bălmў brēezĕs ĭnvĭġōrāte.

Whĭle I ăm wrĭtĭng, ąll äre busў. Thĕ lădĭes äre frўĭng fĭsh, ănd prēpărĭng brĕakfăst; thĕ boys äre wrĭtĭng ŭp thĕir nōte bọoks ănd cŏmplētĭng sọme skĕtchĕs thăt they bēgăn yĕstĕrdāy; lĭttle Bĕn ănd Pŏllў äre ġăthĕrĭng shĕlls bў thĕ sēa; thĕ cōachmăn ĭs grọomĭng thĕ tēam, ănd ąll äre chēerfụl. All

äre ăntĭçīpātĭng à gọod tīme bȳ thĕ sēa, ănd ĭn thĕ sēa, whĕn brĕakfăst ĭs ĕndĕd.

Camp Barnegat,
11 A. M., June 24th.

Jŭst rētŭrned frŏm à rămble ŭp thĕ strănd. Thĕ spĭrĭts ŏf ạll äre hĭgh. Wē hăve wạlkeđ sĕvĕrăl mīles; thĕ āir ĭs ĕxçĕssĭvelў hŏt ănd sòme cŏmplāin thăt they äre à lĭttle tīred. Each clāims thăt hē hăs hăd à gọod tīme ănd thăt thĕre ĭs nŏthĭng ĕlse sō dēlĭghtfụl ăs ăn ĕncămpmĕnt bȳ thĕ strănd.

As wē strōlled down thĕ strănd, thĕ sŭn shōne brĭghtlў; thĕ brēeze wạs bàlmў; thĕ sēa wạs çàlm; thĕ sănd ălŏng thĕ dụne wạs pärehĭng hŏt; bŭt, thĕ sēa rŏckĕt ănd thĕ sănd swōrd-grăss wĕre ăs grēen ăs mĕadōw grăss ŭpŏn à Māy mōrnĭng. Thĕ spĭrĭts ŏf thĕ stūdĕnts wĕre lĭght ănd they wĕre ălīve tọ thĕ beaūtĭes ŏf thĕ lăndscāpe, ănd tọ ạll thĕ charms thăt thĕ rămble cọuld prēsĕnt. Hēre wạs ăn ĭntĕllĕctūăl fēast. Hēre wạs sprĕad bēfōre ŭs, ĭn brĭghtĕst cŏlors, thĕ hăndĭwòrk ŏf Hĭm whọ ĭs thĕ Authòr ŏf thĕ beaūtĭfụl ănd thĕ gọod. And, ŭpŏn ŭs, thēse thĭngs

made a lasting impression. Oh, such scenery inspires devotion! Such scenery stirs the soul and leads men's thoughts out from themselves, to contemplate the greatness, the goodness, and the wondrousness of the Architect Divine! Is there a stronger incentive to adoration, than a sunny morning by the sea? Who can survey that billowy deep, that cerulean sky, that beaming sun and the verdant strand without a feeling of awe, of wonderment, of adoration? As I contemplate these things I experience an overflow of soul that seeks relief in those oft repeated words:

"Great and marvelous are Thy works, Oh Lord of hosts; in wisdom hast Thou made them all!" "Bless the Lord, oh my soul!" "Talk ye of all His wondrous works." "I will praise Thee, Oh Lord, among the people." "One generation shall praise Thy works to another, and shall declare Thy mighty acts." "Oh, that men would praise the Lord for His goodness and for His wonderful works to the children of men."

Upon the shore lay many a beautiful pebble and many a curious shell. Here were sea

weeds in great profusion; here were bones of many a many a marine monster; here were fragments of many a wrecked ship—each and all strewed along in such a way as to make our journey curious and the spectacle awful. Here we admired the shining pebbles; there we viewed the curious shell. Here the wind exceavated the sandy dune; there the eddying wave piled its wondrous treasures. So, curiosity succeeded curiosity, in pleasing succession, until the ramble was long and the party weary. And yet our ramble was not without interruptions. Many were the pleasing incidents that happened by the way. And, sometimes we halted to view a passing steamer, sometimes to view the distant sail.

Upon his return, each one seems to be heavily laden with sea shells and such curiosities as are commonly found upon a sea beach. The note books are out, and in the open air, and in the blaze of the sun, with pencil in hand, each one is seated as suits best his convenience, or his fancy; some sit upon logs of drift-wood; others upon hillocks of sand; others upon camp chairs. But, in whatever way seated, each one is fashioning the records

ŏf thĕ mōrnĭng, ōr skĕtchĭng sŏme nōtewŏrthy lăndscāpe. It ĭs quĭĕt nŏw. Exçĕptĭng thĕ rōar ŏf thĕ sēa, nŏt a sŏund ĭs tŏ bē hĕard. Thĕ sănd ĭs părchĭng hŏt; ănd thĕ blādes ŏf sănd grăss ăre ăs mŏtiŏnlĕss ăs ĭf thçre nĕvĕr hăd bēen a wĭnd.

About thrēe mīles south ŏf Bāy Hĕad ĭs a sīte ăt whĭch thĕ ŏppŏrtūnĭty fŏr stŭdy ĭng thĕ sŭbsīdĕnçe ōr sĭnkĭng ŏf thĕ New Jĕrsey cōast ĭs vĕry fāvōrable. Espĕçiallỹ ĭs thĭs sō whĕn thĕ tīde ĭs out. At sŭch tīmes, ăt thĭs plāçe, ĭn thĕ bŏttŏm ŏf thĕ sēa māy bē sēen, ĭn nătūral pōsĭtiŏn, a sēa-kĭlled ănd a sēa-prē-sĕrved sŏd. Thĭs sŏd sŏme yēars ăgō, (pĕrhăps çĕntūrĭes ăgō,) was thĕ swărd ŏf a sąlt mĕadōw thăt ĕxtĕndĕd bētwēen thĕ dunes ănd Bärnē găt Bāy. Thĭs ōld sŏd, ăs sēen ĭn thĕ bŏttŏm ŏf thĕ sēa, ōwĭng tŏ thĕ ămount ŏf pēat ĕntăngled ĭn thĕ grăss roots, ĭs ąlmōst blăck. In thĭckněss, ĭt rāngĕs frŏm eight ĭnchĕs tŏ a fŏot. It ĭs vĕrỹ strŏng ōr toŭgh; ănd wĭth thĕ hănds, ōr wĭth a hōe, ĭt māy bē tōrn ŭp, ĭn lărge cākes, whĭch sŏmetimes ăre twŏ fēet wīde, fŏur fēet lŏng ănd a fŏot thĭck. Of thĕ ŭppĕr sŭrfăçe ŏf thēse cākes ŏf sŏd,

thĕ ăppēarȧnçe ĭs̱ vĕrў sĭmīlȧr to̤ thăt ŏf thĕ sa̤lt mĕadōw sŏd, now ḡrōwĭṉg bēhīnd thĕ dṳnes̱ lĕss thăn 200 yärds̱ ȧwāy. Thĕ stĕms̱ ŏf thĕ sa̤lt mĕadōw ḡrȧss äre wĕll prēs̱ĕrved; whīle thĕ ro̤ot ănd thĕ fībres̱ ŏf thĕ ro̤ots nŏt ōnlў lo̤ok līke thōs̱e ŏf ȧ lĭvĭṉg sŏd, bŭt äre yĕt vĕrў strŏṉg;—ìndēed, thĕ toŭghnĕss ŏf thĭs ānçiĕnt swa̤rd ĭs̱ ĕntīrelў ōwĭṉg to̤ thĕ strĕṉgth ŏf thēs̱e ro̤ots ănd fībres̱.

Dūrĭṉg ȧ stōrm, whĕn thĕ fōrçe ŏf thĕ wāves̱ ĭs̱ sŭffĭçiĕnt, pōrṭiȯns̱ ŏf thĭs ānçiĕnt sŏd äre tōrn ŭp, brōkĕn to̤ piēçĕs̱ ănd căst ŭpŏn thĕ strănd. As̱ found hēre, thĕ frăḡmĕnts äre ĭrrĕḡūlȧr ĭn sīze, sĕldȯmlў mōre thăn tĕn ĭnchĕs̱ thĭck ănd two̤ fēet lŏṉg,—sȯmewha̤t roundĕd ăt thĕ cōrnĕrs̱ ănd thĕ edġĕs̱ bȳ thĕ ăcṭiȯn ŏf thĕ wāves̱. The̱y äre nĕvĕr found ĭn ȧbŭndȧnçe ăt ănў plāçe; bŭt piēçĕs̱ māy bē pīcked ŭp ăt a̤lmōst ănў sīte ŭpŏn thĕ strănd ŏf thĕ Squȧn pēnĭnsūlȧ. Whĕn drȳ, the̱y bŭrn sȯmewha̤t ăs̱ drȳ pēat bŭrns̱, bŭt mōre brĭsklў. As̱ found ŭpŏn thĕ shōre bȳ thĕ nŏn-scīĕntĭfĭc, the̱y äre ŏbjĕcts thăt ēlĭçĭt thĕ wīldĕst cŏnjĕctūres̱, ănd prōvōke thĕ strānġĕst ănd thĕ lŏṉḡĕst līne ŏf

quĕsṭiȯns̱. Thĕ nāme bȳ whĭch they äre lōcȧllȳ knōwn ĭs̱ "Nĭg̅ĕr-hĕads̱."

Bēnēath thĭs sŏd ĭs̱ whīte sănd. Thĭs sănd ĭn a̤ll pärtĭcūlȧrs̱, rēsĕmbles̱ thăt whĭch ĭs̱ bēnēath thĕ sŏd thăt skĭrts Bärnēg̅ăt Bāy. Whĕn ĕxpōs̱ed to̤ thĕ ăcṭiȯn ŏf thĕ wāves̱, ĭt so̤on lo̤oks sō mŭch līke thăt whĭch fōrms̱ thĕ sŭrfȧçe ŏf thĕ strănd hēre, thăt ĭt is̱ nŏt pŏssīble to̤ tĕll whạt pärt hăs̱ bēen ĕxpōs̱ed thĕ lŏṉg̅ĕst.

Apprŏxīmātelȳ, ĭt ĭs̱ nŏt dĭffĭcŭlt to̤ tĕll thĕ tīme whĕn thĭs ānçiĕnt sŏd wạs̱ bētwēen thĕ dṳne ănd Bärnēg̅ăt Bāy, ănd sŭstāined ȧ g̅rōwth ŏf sa̤lt mĕadōw g̅rȧss. As̱ ĭs̱ shōwn ĭn mȳ lĕctūre ŏn thĕ Osçĭllāṭiȯn ŏf cōasts, thĕ lănd ŭpŏn thĭs cōast hăs̱ sĕttled down ăt thĕ rāte ŏf one fo̤ot dūrĭṉg thĕ pērĭŏd ŏf twĕntȳ-fīve yēars̱. Wē now fīnd thĭs sŏd ĭn thĕ bŏttȯm ŏf thĕ sēa, ăt ȧ lĕvĕl nīne fēet bēlōw thĕ sŏd thăt skĭrts Bärnēg̅ăt Bāy. Allowĭṉg thăt whĕn g̅rēen wĭth lĭvĭṉg sa̤lt g̅rȧss, ĭt wạs̱ ăt ȧ lĕvĕl wĭth thăt whĭch now skĭrts thĕ bāy, ĭt mŭst hăve bēen ăs̱ mŭch ăs̱ two̤ hŭndrĕd ănd twĕnty-fīve yēars̱ ȧgō sĭnçe ĭt wạs̱ ȧ lĭvĭṉg sŏd.

Whīle ŭpŏn thĭs ădvăntāġeoŭs sīte, ănd

ăftĕr sȯme tīme spĕnt ĭn ĕxămĭnĭn̲g ŧhĕ ānçiĕnt sŏd, ănd ŧhĕ ĕvīdĕnçĕs̲ ŏf sŭbsīdĕnçe, ōr sĭnkĭn̲g ŏf ŧhĕ strănd, ŧhĕ stūdĕnts lĭstĕned to̤ ȧ lĕ€tūre ŭpŏn ŧhĕ ŏsçĭllāṭiȯn ŏf ŧhĕ €ōast ŏf New Jĕrs̲eў, ănd ŭpŏn ŧhĕ ŏsçĭllāṭiȯn ŏf lănds̲ ĭn ġĕnĕrȧl.

Whĕn wē hăd rētŭrned frŏm our rămble ŭp ŧhĕ strănd, wē prēpāred to̤ bāŧhe. And now ŧhăt bāŧhĭn̲g. Whạt sĕnsāṭiȯns̲ ĭt prōdūçĕs̲! To̤ ŧhĕ bēḡĭnnĕr, how s€ārў ĭt ĭs̲! How €a̤uṭioŭslў hē vĕntūres̲ ĭn! At fīrst hē s€ārçelў brāves̲ ŧhĕ sŭrf! Bŭt so̤on €oŭrāġe €ȯmes̲! Thĕn sēe ŧhăt bĭḡ wāve €ȯmĭn̲g! How ĭt swĕlls̲! How ĭt rīs̲ĕs̲! And ăs̲ ĭt nēars̲ ŭs how frīghtfṳl ĭt lo̤oks! Sēe ĭts €ŭrlĭn̲g, pōurĭn̲g, rāġĭn̲g €rĕst! Sēe! It ĭs̲ €ȯmĭn̲g ōvĕr our hĕads̲! Bo̤-o̤-o̤! Oh! How! How €ōld! How €ōld ĭt ĭs̲! It fāirlў €hĭlls̲ mē! Whạt ȧ rous̲ĕr ŧhăt wạs̲! Clēar ōvĕr our hĕads̲! How ĭt străn̲ḡled mē! And ŧhe̲re €ȯmes̲ ănȯŧhĕr! Stănd fōr ĭt—hōld mē fĭrmlў! Sīde to̤ ŧhĕ sēa! Now! sēe how ĭt hāstĕns̲! How mȧjĕstĭ€ȧllў ĭt swĕlls̲! How hīgh ĭt īs̲! 'Twĭll drown ŭs sūre! Bo̤-o̤-o̤! Oh! Oh! Oh! How! How €ōld—how €ŏld ĭt ĭs̲! And yŏnder ĭs̲ ănȯŧhĕr! Stănd fōr ĭt—sīde to̤ ŧhĕ sēa! Now,

ăs ĭt mēets ŭs, fēel ĭts ġĕntle bŭt ąwfŭl swĕll! Fēel ĭt lĭft ŭs frŏm thĕ sănd! Nŏw, hŏw ġĕntlў wē rīse wĭth thĕ swĕllĭng wāve! Hŏw ġăllăntlў our hĕads rīse ăbóve thĕ ĕrĕst! Hŏw ġĕntlў wē sĕttle ŭpŏn thĕ sănd! And ăs thĕ wāve hăs pássed ŭs, sēe hŏw fūrĭoŭslў ĭt hāstĕns tōwärds thĕ strănd! Rŭshĭng, rōarĭng, tŭmblĭng, rōllĭng, rāġĭng, fōamĭng, tĭll ĭt sprĕads ĭn sŭrf ŭpŏn thĕ săndў strănd. Bŭt look sēawąrd! Thăt lŏng rĭdġe ŏf dĭstănt swĕll ĭs ăn ădvăncĭng wāve! As ĭt nĕars ŭs, hīghĕr ĭt rĭsĕs! Sĭlĕntlў ănd măjĕstĭeăllў ĭt hāstĕns ŏn! Nŏw, stănd fōr ĭt; ănd ăs wē fēel ĭts lĭftĭng swĕll, ą ġĕntle lēap wĭll ăid ŭs ĭn kēepĭng our hĕads ănd shōuldĕrs ăbóve ĭts ąwfŭl ĕrĕst. Hīghĕr ănd hīghĕr ĭt grōws! It ĭs nŏw hīghĕr thăn our hĕads! Thĕ trŏugh ĭs pássĭng ŭs! Nŏw ĭt bēgĭns tọ lĭft ŭs! Lēap! Oh! Hŏw grănd lў ĭt prōjĕetĕd ŭs skўwärd! Hŏw nīcelў ĭt sŭstāined our hĕads ăbóve ĭts fōamĭng ĕrĕst! Hŏw grănd tọ lọok ōvĕr ōld ōcean frŏm thĕ ĕrĕst ŏf ą wāve. O! What fŭn tọ bāthe! What fŭn tọ bāthe! Hŏw I lĭke thĕ fōamў wāve ănd thĕ sŭrfў flōw! Rīse hīgh, ōld wāve your fōamў ĕrĕst, ănd brēathe thăt ąwfŭl rōar! Hŏw I lĭke tọ

brāve you! How I like your lĭftĭng swĕll ănd tŏ pēer frŏm your fōamў ĕrĕst.

Althō thĕ stūdĕnts, ĭn thĕ māin, sēemed tŏ ĕnjoy thĭs sēasŏn ŏf bāthĭng, wē dĭd nŏt gō ĭntŏ thĕ sēa fōr spōrt. Cĕrtaĭn prĭnçĭples rĕlătĭve tŏ thĕ ăcțiŏn ŏf thĕ wāves ăre bĕst lĕarned by gōĭng out ĭntŏ thĕ sēa, tŏ sŭch à dĭstançe thăt thĕ ĕrĕst ŏf thĕ ădvănçĭng wāve rĭsĕs hĭghĕr thăn thĕ stūdĕnt's hĕad. Accōrdĭnglў, ēach ĭn hĭs tŭrn, was tākĕn tŏ à sūĭtable dĭstançe frŏm thĕ shōre ănd prŏpĕrlў stāțiŏned ĭn à sāfe plāçe by thĕ sĭde ŏf hĭs tēachĕr. Whīle hēre, ēach ĕxpērĭĕnçed thăt strānge sĕnsāțiŏn whĭch ĕvĕrў one fēels whĕn hē ĭs ĭn thĕ çĕntĕr ŏf à wāve thăt ĭs hĭgh ēnoŭgh tŏ ōvĕrwhĕlm hĭm. Of thĭs ĕxĕrçĭse, stūdĕnts ăt fĭrst ūsūăllў hăve à drĕad. Bŭt, thĕre nēeds bē nō fēar. In ĭt, thĕre ĭs nō dănggĕr. And, soon, mōst stūdĕnts lĭke tŏ bē tākĕn ĭntŏ thĕ bĭg gĕst wāve. Fōr, ĭn thăt pōsĭțiŏn, thĕre ĭs nō dăsh, pŭshĭng one tōwärd thĕ shōre, nōr frŏm thĕ shōre. Bŭt, prĕssed ēquăllў ŭpŏn ēithĕr sĭde, thĕ swĕll lĭfts one clēar ŏf thĕ sănd ănd lĕts hĭm down ăgăin ĭn thĕ sāme plāçe. Thĕ nĕxt wāve bēhāves ĭn thĕ sāme wāy,—lĭfts hĭm frŏm thĕ bŏttŏm ănd lĕts hĭm down

ĭn ĕxăctlў thĕ sāme plāçe. And, ŏthĕr thĭngs bēĭng ēqŭàl, hēre one mĭght stănd tĭll dọomsdāy, nĕvĕr mọved bў thĕ wāves tọ thĕ ēast, tọ thĕ wĕst, tọ thĕ nŏrth, ŏr tọ thĕ south. Thĕ ăctĭon ŏf ēach sŭççĕssĭve wāve ĭs tọ lĭft one clēar ŏf thĕ sănd ănd plāçe him băck ăgāin ŭpŏn thĕ sāme plāçe.

Thĭs ĕxpĕrĭmĕnt sĕttles thĕ grēāt prŏblĕm ŏf thĕ bēhāvĭọr ŏf wāves. Thĕ mọvemĕnt ŏf thĕ wāves dọes nŏt trănspōrt wạtĕr frŏm one sīde ŏf thĕ ōçeăn tọ thĕ ŏthĕr. The mọvemĕnt ĭs vĕrtĭcăl,—thăt ĭs, ĭt ĭs tōwärd thĕ skў, ănd thĕn tōwạrd thĕ bŏttŏm ŏf thĕ sēa. Thĕ wạtĕr ŏf ă wāve mọves tōwạrd thĕ lănd ōnlў ĭn thōse plāçes ĭn whĭch thĕ sēa ĭs sō shăllōw thăt thĕre ĭs nŏt ēnoŭgh wạtĕr ălŏng thĕ lănd sīde ŏf thĕ wāve tọ cọuntĕrăct thĕ grēātĕr ămọunt ŭpŏn thĕ ŏppōsīte ōr sēa sīde.

Thĕ çạll tọ dĭnnĕr ĭs ŭrgĕnt; I shăll hăve tọ plāçe pĕnçĭl ănd pāpĕr ăwāy ănd cărve sọme ŏf thōse blūe fĭsh. At thĕ sēa, blūe fĭsh ănd cŏffēe ăre lŭxūrĭes. Althō thĕ tāble sēems lōadĕd dọwn wĭth ŏthĕr "gọod thĭngs," blūe fĭsh ănd cŏffēe, ănd brĕad ănd bŭttĕr ăre ēatĕn mōst ĕxtĕnsĭvelў. In făct, ă hŭngrў stūdĕnt

gōes ăt a blūe fĭsh vōrăcioŭslў. And ĭt ĭs wĕll thăt hē dŏes. It ĭs gŏod fōr hĭm.

Dūrĭng ăt thĕ sēa ĭs nĕvĕr dŏne ĭn a hŭrrў. Each one ēats ăs lēisūrelў ăs ĭf thĭs was hĭs fĭnal tăsk, ănd hē wĭshed to make ĭt ăs lŏng ăs pŏssĭble. Each one sēems ăs ŭnconcĕrned ăs ĭf all hĭs ĕffĕcts wĕre ŭpŏn hĭs bŏdў. As wē āte, thĕ plĕasūres ŏf thĕ pàst wĕre reviewed, thĕ ĕnjoyments ŏf thĕ prĕsĕnt wĕre dĭscŭssed, ănd thĕ prŏspĕct ŏf thĕ fūtūre pärt ŏf thĕ trĭp mĭrthfŭllў ănd vĭvĭdlў pōrtrāyed. Nŏne spōke ŏf hōme, ōr ŏf frĭends lĕft bēhĭnd. One mĭght hăve sŭppōsed thăt ēach one hăd wĭth hĭm all hĭs ĕffĕcts ănd ĕvĕrў frĭend ănd ĕvĕrў rĕlatĭve. Sŭch ĭs tĕnt lĭfe wĭth stūdĕnts bў thĕ sēa.

Camp Barnegat,
7 P. M., June 24th.

Dūrĭng thĕ ĕarlў pärt ŏf thĕ ăftĕrnoon, thĕ stūdĕnts wrōte ŭp their nōtes, ădjŭstĕd their clōthĭng, fĭxed their tĕnt ănd scĭĕntĭfĭc ĕquĭpmĕnts ănd păcked ăwāy thĕ shĕlls ănd ŏthĕr mātērĭăl găthĕrĕd dūrĭng thĕ fōrenoon. Each one sēemed to bē ăs bŭsў ăs a bēe ănd ăs

hăppy̆ ăs̱ ăn ĕlf. Quĭĕtūde ănd ĭndŭstry̆ prē-vāiled.

At 4 ō'ꞓlŏck, to̤ viꞓw, wē rēpāired to̤ ꞓhĕ tŏp ŏf ꞓhĕ hīghĕst knōll ŏn ꞓhĕ dūnĕ. Thĕ sēa brēeze wạs̱ strŏṉg ănd ꞓhĕre wạs̱ ȧ hāze ĭn ꞓhĕ āir whĭꞓh sȯmewhạt ĭntĕrfēred wĭꞓh ꞓur wȯrk. Bŭt, wĭꞓh ꞓhĕ tĕlēsꞓōpe, wĭꞓhĭn ꞓhĕ rānġe ŏf vĭsịȯn, ĭt wạs̱ ēas̱y̆ to̤ dēfīne ăny̆ ŏbjĕꞓt ꞓhăt mo̤ved ŭpŏn ꞓhĕ dēep, ōr rĕstĕd ŭpŏn ꞓhĕ shōre. Frŏm ꞓhĭs poꞓint, wē lọokeđ ōvĕr ꞓhĕ a̤wfụl sēa, wạtꞓheđ ꞓhĕ mo̤vĭṉg bärks, sa̤w shĭps dĭsăppēar ănd ăppēar, märkeđ ꞓhĕ stĕady̆ mo̤vemĕnt ŏf ꞓhĕ hūġe ōçeȧn stēamĕr, ănd lĭstĕned to̤ ꞓhĕ rōar ŏf ꞓhĕ plŭnġĭṉg wāves̱. Hēre wē ꞓŏntĕmplātĕd; hēre wē ĕnjoꞓyed. Thĭs wạs̱ ăn hꞓur fōr ĕnlärġĭṉg ꞓhĕ mīnd ănd ĕxpăndĭṉg ꞓhĕ sōul. Fōr, sŭꞓh scēnēry̆ nŏt ōnly̆ dēlīghts, bŭt ĭt ĕnlärġĕs̱, ĕxpănds̱ ănd rē-fīnes̱ ꞓhĕ sōul. It mākes ꞓhĕ stūdĕnt lärġĕr, mōre ꞓŏmprēhĕnsĭve ănd mōre bēnĕvōlĕnt. It ꞓŭltīvātes ꞓhăt ĕlēmĕnt ŏf mīnd ꞓhăt dēals wĭꞓh ḡrăndeūr; ănd, ăs̱ ȧ ꞓŏnsēquĕnçe, lēads̱ ꞓhĕ stūdĕnt ĭnto̤ ꞓhōs̱e līnes̱ ŏf stŭdy̆ ănd rēflĕꞓtịȯn ꞓhăt ĕlēvāte hĭm ănd māke hĭm bĕttĕr.

Whīle ŭpŏn ꞓhĕ knōll, ꞓhĕ stūdĕnts lĭstĕned

to a letter which discusses Coasts, Shore Formations, Dunes, &c., &c.

At 7 o'clock, P. M., we ate supper. Craving appetites demanded a large supply of blue-fish and strawberries. And, by the way, among the students, these two artificials are favorite suppers dishes. Indeed, they are sel-dom ly refused at any meal.

After supper there was a general change of apparel. The hour for bathing drew on. Each anticipated a good time, and lots of sport. All assembled at the sea. And now, what a time! At first, only into the surf they venture. But, embolden by the ex-perience of the morning, soon they begin to venture out into the breakers. Tumbling and rolling comes a big wave! Ho-o-o,—ho-o-o! And down goes every girl,—headlong into the water! We-o! We-o! We-o! And as un-graceful as a rat making his escape from a soap barrel, each girl struggles to regain the erect position, and a snug appearance. But, —Ha-o! Ha-o! Ha-o! There advances another wave; and, by its rolling erest, headlong and landward are dashed the girls again. We-o! We-o! Ha-o! And the alleo is as fast to

ēaeh gĭrl's skĭn ăs thĕ pāpĕr ĭs tọ a pāpĕred wạll. Drownĭng kĭttĕns nĕvĕr lọoked mōre slēek, nōr hạlf sō mŭeh eōnçĕrned ạbout their ăppēarançe. Slēek hĕads, slēek bäcks, slēek ärms—āye, răthĕr a slēek lọokĭng sĕt ŏf gĭrls. Bŭt sŭeh a squạbblĭng ănd sŭeh a serămblĭng, ănd sŭeh a plăshĭng, ănd tŭmblĭng. Thĕ pōrpōisĕs thĕmsĕlvĕs eọuldn't eŭt sŭeh a fĭg ūre. And thĕn sŭeh ăn ĕffōrt tọ hĕlp ēaeh ọthĕr ŭp—whĭeh ōnlў hĕlps ēaeh ọthĕr down.

Bŭt, thĕre rōlls ŏn ănọthĕr wāve; ănd, bēfōre hạlf thĕ gĭrls äre ŏn their fēet—splŭnge! And bŭrĭed ŭp ĭs ĕvĕrў gĭrl,—hĕadlŏng, tŭmblĭng, serămblĭng lăndwärd they gō! Thĕn, ăs thĕ wāve hăs pạssed thĕm—Hạ-ọ! Hạ-ọ! Hạ-ọ! frŏm ĕvĕrў mouth ăs their slēek hĕads pēer ạbọve thĕ fōamĭng sēa. And thĕn—ōh, ōh, ōh mў! Oh-ōh-ōh-dēar! And thĕn thĕre eọmes ănọthĕr breākĕr. And the ōld wāve ădvănçĕs ŭr-r-r-r-r-r! Splŭnge! And ŭpŏn thĕ bŏttọm ŏf thĕ sēa ĭs rōlled a bĕvў ŏf serămblĭng gĭrls ągăin.

Thŭs, ŭps ănd downs, tŭmbles ănd plăshĕs, squạllĭngs ănd shrīekĭngs, pŭllĭng ănd lĭftĭng māke thĕ busĭnĕss ŏf thĕ hour. Tọ bē sūre, thĭs ĭs gọod ĕxĕrçīse—jŭst thĕ kind tọ ĭnsūre

sound and tranquil sleep,—but it seems to me that none but girls could like it.

Meanwhile the boys, trained to those bull-frog movements they call swimming, are gliding thro the water like dipper ducks,—sometimes upon the very crest of a wave, sometimes in the trough between two waves, sometimes plunging thro a rolling breaker.

Camp Barnegat,
2 A. M., June 26, 1882.

Yesterday was the Sabbath. The Academies observed it as the Lord's day—not in listless lounging; not in parade; not in idle prating; not in sensual convers[illegible]; not in sport nor yet in strife to out do each other in a display of apparel—but in serious contemplating the works of the Architect Divine; —in looking thro the works of nature up to nature's God. And in this respect, well did each student acquit himself during the entire day.

The morning dawned beautiful. Upon the cerulean vault was seen not a cloud. The balmy breeze from the pines blew gently to-

wärd thĕ sēa. Sāve thĕ shrĭll nōte ŏf thĕ fĭsh hąwk, thĕre wąs hĕard nŏt ą sound ŏf bēast ōr bĭrd; ănd yĕt thĕre wąs nŏt stĭllnĕss. Thĕ dēep sound ŏf thĕ plŭngĭng wāves, ănd thăt hĕavў mōan ŏf thĕ soundĭng sēa, fĭlled thĕ āir wĭth noĭsĕs thăt wĕre ąwfŭl, ănd mādе thĕ mōrnĭng sōlĕmn.

Bēfōre thĕ läst stär hăd dĭsăppēared, wē clōsed our tĕnts ănd wĕnt down tǫ thĕ bēach tǫ sēe thĕ sŭn rīse.

All ăssĕmbled ŭpŏn thĕ strănd ănd pĕnsĭvelў āwāitĕd thĕ cŏmĭng sŭn. Thĕ gŭll skĭmmed thĕ brĭnў sēa, thĕ fĭsh-hąwk clēaved thĕ āir, thĕ snōwў sāil mājĕstĭcallў plowed thĕ rŭffled dēep, thĕ fōamĭng wāve dăshed āgāinst thĕ săndў shōre. Bŭt sǫon, fär ŏff ōvĕr thĕ sēa wąs sēen ą brĭght spŏt. Thăt spŏt märked thĕ dĭrĕctiǫn ĭn whĭch wē sąw thĕ sŭn rīse. Ąs wē gāzed, ąll bēcāme ăttĕntĭve. Sēe thĕre bēnēath thăt brĭght spŏt,—sēe thăt spĕck ŏf fīre! Thăt ĭs thĕ ŭppĕr lĭmb ŏf thĕ dĭsk ŏf thĕ sŭn. Lärgĕr ănd lärgĕr ĭt grōws. How ĭt glōws—how grāçefŭllў ĭt ĭncrēasĕs! Now ĭt ĭs ą hälf dĭsk, now ĭt ĭs ą glōbe ŭpŏn ą shĭnĭng pĕdĕstąl, now thĕ fĭgūre hăs ărĭsĕn clēar ŏf thĕ wāves.

How ɕūrĭoŭs thĭs mōrnĭng sŭn! How sŏft hĭs lĭght! Wē gāze ŭpŏn hĭs ġēnĭăl fāçe wĭth ăs lĭttle dăzzlĭng ŏf thĕ eyes, ăs wē would ŭpŏn ăn ōrdĭnārў lămp. Bŭt, ăs hē ăsçĕnds, brĭghtĕr hē grōws, fiērçĕr äre hĭs rāys; mōre fĭerў ĭs hĭs fāçe, ŭntĭl hĭgh ŭp ĭn thĕ skў hē rēvēals mōre fŭllў hĭs dĭstĭnɕtĭve qualĭtĭes.

Sŭnrĭse ăt sēa hăs ąlwāys bēen rēgärdĕd ą dēlĭghtfŭl sçēne. And wĕll ĭt māy. Nō one ɕăn ădēquātelў dēsɕrĭbe ĭt; nō one ɕăn pĭɕtūre ĭt. It ąlĭke dēfies thĕ pāintĕr ănd thĕ rhĕtōrĭçiąn. And, sō ĕvănĕsçĕnt äre thĕ phāsĕs thăt they ŭttĕrlў bäffle thĕ skĭll ŏf thĕ phōtŏgrąphĕr. As ĭt ĭs ăppēarĭng frŏm bēhĭnd thĕ ĕarth, ĭt sēems tọ ēmĕrġe frŏm thĕ sūrfąçe ŏf thĕ sēa. At fĭrst, thĕre ĭs sēen ą mēre spĕck ŏf brĭght lĭght. Soon ăppēars ą ɕrĕsçĕnt ŏf yĕllōw lĭght. Thĭs soon bēɕomes ą hąlf dĭsk. Nĕxt, thĕ hąlf dĭsk sēems tọ bē sŭppōrtĕd ŭpŏn ą çўlĭndĕr thăt slōwlў ēlŏngātes ănd brĭghtĕns, ănd ăs ĭt ēlŏngātes, ɕŏntrăɕts ăt thăt pärt whĭɕh rĕsts ŭpŏn thĕ sēa. Thĭs ɕŏntrăɕtĕd pärt soon ăppēars tọ bē ăn āĕrĭăl pĕdĕstąl ŭpŏn whĭɕh rĕsts ą hūġe glōbe glōwĭng wĭth hēat. Bŭt whīle wē äre gāzĭng, thĕ ɕŏntrăɕtĕd pärt ŏf thĕ pĕdĕstąl bēɕomes ăttĕnū-

ātĕd, grōws mōre ănd mōre slĕndĕr ŭntĭl ĭt ĭs nŏt vĭsĭble. Jŭst ăt thĭs jŭnctūre, thĕre sēems tọ bē ăn ăsçĕndĭng glōbe ŏf fīre, ŭndĕr whĭch ĭs à mōst beaūtĭfụl çĭrcūlăr ārcà ŏf vĕrў brīght yĕllōw līght.

Whĕn thĕ sŭn ĭs jŭst rĭsĭng, ĭts līght dòes nŏt dăzzle thĕ eўes. It căn bē viewed wĭth thĕ ŭtmōst cāse. Fōr thĭs phēnŏmēnŏn wē ăssīgn thĭs rēasọn: Thĕ strātŭm ŏf ătmŏsphēre dīrĕctlў àbóve thĕ sŭrfàçe ŏf thĕ sēa, ĭs dĕnselў chärġed wĭth moistūre. Thĭs moistūre, ăs ĭn thĕ cāse ŏf fŏg ănd cloud, ăbsōrbs à lärġe pärt ŏf thĕ sŭn's rāys, ănd sō sŏftĕn thōse thăt ĭt dòes nŏt ăbsōrb, thăt they mākе ŭpŏn thĕ eўe răthĕr ăn ăgrēeable ĭmprĕssịon.

Bŭt whĕn ĭt hăs ăsçĕndĕd thĕ skў bŭt à few dēgrēes, ĭts brīghtnĕss ĭs ĭntĕnse; ănd ŭpŏn thĕ sŭrfàçe ŏf thĕ wạtĕr, ĭn thĕ dīrĕctịon ŏf thĕ sŭn, ĭs à spärklĭng sheen frŏm whĭch thĕ rēflĕctĕd rāys dăzzle thĕ eўes ąlmōst ăs mŭch ăs dọ thōse thăt ĕmănāte dīrĕctlў frŏm thĕ blāzĭng sŭn. Thĭs phēnŏmēnŏn ĭs cūrĭoŭs ănd beaūtĭfụl.

Whĕn wē hăd sāṭĭātĕd our mīnds wĭth thĕ dēlīghts ŏf sŭmrīse, ănd thĕ beaūtĭes thăt ăttĕnd à mōrnĭng lăndscāpe bў thĕ sēa, wē

rēpāired to̤ our cămp ănd prēpāred brĕakfȧst. Crāvĭn̲g stȯmȧchs ĭmpāṭiĕntlў wāitĕd thĕ ca̤ll. Bŭt ăt lĕn̲gth, thĕ ca̤ll wạs̲ hĕard; ănd thĕ Acȧdĕmĭcs̲ ăssĕmbled ăround thĕ lŏn̲g tāble to̤ ēat ȧ Sŭndāy mōrnĭn̲g brĕakfȧst bȳ thĕ sēa.

Dūrĭn̲g thĕ fōreno̤on, quiĕtūde prēvāiled. Härdlў ȧ sound wạs̲ hĕard. Thĕ skȳ wạs̲ cloudlĕss. Thĕ sŭn shōne brīghtlў ănd thĕ āir wạs̲ ĕxçĕssĭvelў hŏt. Our thĕrmŏmētĕr ĭndĭcātĕd 105° ăt 11.05 ō'clŏck. Thĕ āir wạs̲ a̤lmōst mōṭiȯnlĕss. Nŏt ȧ lēaf stĭrred. Evĕn thĕ mŏsquĭtō çēased hĭs̲ lūte. To̤ thĕ eȳes̲ thĕ blāzĭn̲g āir wạs̲ pāinfụl. To̤ thĕ bāre fọot, thĕ hēat ŏf thĕ sănd wạs̲ ŭnbeārȧble.

Thĕ stūdĕnts pȧssed thĕ tīme ēach ĭn hĭs̲ ōwn wāy; sȯme slĕpt, sȯme rĕad thĕ Bīble. As̲ ȧ sāil ŭpŏn Bärnēḡăt Bāy wạs̲ ȧ pärt ŏf thĕ prōḡrăm ŏf thĕ to̤ŭr, ănd ăs̲ thĕ ăftĕrno̤on ŏf thĕ 25th hăd bēen sĕt down ăs̲ thĕ tīme fōr sāid sāil, thĕ stūdĕnts lọoked fōrwa̤rd to̤ thĭs ăftĕrno̤on wĭth fŏnd ăntĭçīpāṭiȯns̲. Wē dīned răthĕr ĕarlў—ȧbout 11.30 ō'clŏck. At 12 M. wē wĕnt ŭpŏn ȧ yạcht ănd sĕt sāil. At fĭrst thĕre wạs̲ bŭt lĭttle wĭnd, ănd thĕ mo̤vemĕnt ŏf thĕ yạcht wạs̲ slōw, stĕadў ănd dēlīghtfụl. Bŭt ĭn ȧ few mĭnūtes ȧ brēeze frŏm thĕ S. W.

filled the sails; and, for a short time, we moved along at the rate of seven miles an hour. As the breeze was constant and uniform, the movement of the bark was steady and graceful; and the ride was delightful. Indeed, some were so delighted with the sail that they seemed to be almost in a pensive transport.

But, suddenly the wind became flawy. With the first gust, we were not much affected. But, soon another,—big gger than the first. This made an impression, not only upon the yacht, but also upon the captain and his mate. The rigging was somewhat shifted and all seemed to be doing well. But, soon another and heavier gust struck the sail. This elicited from the captain a volume of nautical words, some of which were just as naughty as they were nautical. Then there was hurry; then there was anxiety. To us, the captain pretended that he feared no danger. But, his pretences had not the desired effect. The case was too transparent. His feelings were too easily read. Yet, the students maintained perfect composure and behaved gallantly.

In lĕss thăn thrēe mĭnūtes ănóthĕr gŭst ¢āme. Thĭs strŭck thĕ sāil wĭth sŭch fōrçe thăt ĭt brōke thĕ măst ŏff ăt thĕ sŏckĕt, ănd swĕpt thĕ ĕntīre rĭg̃gĭng ¢lēar ŏf thĕ dĕck. Hĕld bȳ thĕ ¢ōrdāġe, thĕ măst ănd sāil lāy flōatĭng ălŏng sīde ŏf thĕ hŭll. At thĭs jŭn¢tūre, wē wĕre ĭndēed ĭn à hĕlplĕss ¢ŏndĭțiòn. Thĕ căptaĭn was g̃reātlȳ frĭghtĕned, bŭt bēhāved wĕll. Hĭs lănguāġe shōwed thăt hē was sō tĕrrĭfĭed thăt, fōr thĕ mōmĕnt hē knew nŏt what hē sāid, nōr what hē dĭd. Bŭt soon hĭs prĕsĕnçe ŏf mĭnd was ăppărĕnt, ănd hē g̃āve thĕ sĭg̃năl fōr āid. In à shōrt tīme à nŭmbĕr ŏf yạchts ănd skĭff's wĕre ălŏng sīde ŏf thĕ wrĕck. Amŏng thēse was one sĕnt out bȳ thĕ yạcht ¢ŏmpànȳ to tāke ¢hărġe ŏf thĕ ¢rew. Upŏn thĭs wē wĕnt, ănd thĕ ¢ăptaĭn ŏf thĭs yạcht, to fĭnĭsh thĕ ĕng̃āġemĕnt thăt thĕ ¢ŏmpàny hăd mādc wĭth ŭs, sĕt sāil ŭp thĕ bāy.

Dūrĭng thĕ ¢ătăstrōphē ănd sŭbsēqu¢nt to ĭt, thĕ stūdĕnts dĭsplāyed sŭch ¢ŏmpōsūre ănd sŭch prowĕss thăt they wŏn thĕ ĕn¢ōmĭŭms ŏf ạll who vĭsĭtĕd thĕ wrĕck, ōr lĕarned thĕ hĭstōrȳ ŏf ĭt ŭpŏn thĕ shōre. Exçĕptĭng one, ạll wĕre lĕss frĭghtĕned thăn thĕ ¢ăptaĭn ănd

hĭs̱ māte. Thĕre wạs̱ nō ꞓŏnstĕrnāṭiȯn. Eaꞓh ȯne māintāined hĭs̱ ōr hĕr pōsĭṭiȯn ăs̱ ꞓŏmpōsĕdlў ăs̱ ĭf ĭt wạs̱ ăn ŏꞓꞓŭrrĕnçe ꞇhăt hăd hăppĕned tọ ꞇhĕm ĕvĕrў dāy sĭnçe ꞇhe̱y wĕre bōrn.

Thĕ wrĕck ŏf ꞇhĕ yạcht hăs̱ bēen sō wĕll dēsꞓrībed ĭn ăn ĕssāy bȳ ȯne ŏf ꞇhĕ stūdĕnts, Mĭss Jĕnnĭe Dĭlts, ꞇhăt I hăve plāçeđ ĭt ĭn ꞇhĕ ăppĕndĭx tọ ꞇhĭs vŏlūme. Fōr ȧ fŭrꞇhĕr ănd mōre vĭvĭd dēsꞓrĭpṭiȯn, sēe ꞇhĕ ĕssāy, ăppĕndĭx B.

Bärnĕḡăt Bāy ĭs̱ pĭꞓtūrĕsque. On ꞇhĕ ēast ĭs̱ ꞇhĕ dụne ꞇhăt dīvīdes̱ ĭt frŏm ꞇhĕ sēa; ŏn ꞇhĕ wĕst, ĭs̱ ꞇhĕ ḡreāt pīne fŏrĕst ꞇhăt strĕtꞓhĕs̱ ȧwāy ăs̱ fär ăs̱ ȯne căn sēe. Bētwēen ꞇhēs̱e ănd ꞇhĕ bāy ĭs̱ ȧ lōw, nărrōw plāin, sĭnūoŭs, ĭndĕntĕd wĭꞇh ꞓōves̱ ănd ĕstūārĭes̱, ănd beaūtĭfŭllў ꞓȯvĕred wĭꞇh ȧ swạrd ŏf ḡrēen.

In ꞇhĕ bāy äre nūmĕroŭs smạll īslȧnds̱. Thēs̱e tọo, äre ꞓȯvĕred wĭꞇh ḡrȧss sō ꞇhĭck ănd sō ēvĕn ꞇhăt ēaꞓh prēs̱ĕnts ꞇhĕ ăppēarȧnçe ŏf ȧ wĕll drĕssed lạwn. Bētwēen ꞇhēs̱e īslȧnds̱ ꞇhĕ bĕlts ŏf ꞇhĕ Bärnĕḡăt ĕxtĕnd. In sȯme plāçĕs̱ ꞇhe̱y äre ȧ mīle wīde; ĭn ȯꞇhĕr plāçĕs̱ bŭt ȧ hŭndrĕd fēet. Bŭt whĕꞇhĕr wīde ōr nărrōw, ꞇhe̱y äre ēaꞓh ănd ạll ĕxtrēmelў beaūtīfụl. Indēed, dūrĭṉg ȧ ꞓạlm, ꞇhĕre ĭs̱ nŏt ȧ

rĭpple, ănd ŧhĕ sŭrfȧçe ŏf ēaɕh ĭs̱ līke ȧ sȟēen ŏf sĭlvĕr.

Upŏn ŧhĭs beaūtĭfụl sŭrfȧçe, mēăndĕrĭṉg ȧmĭd ŧhēs̱e ḡrȧss ɕlăd īslȧnds̱, wē spĕnt ŧhĕ ăftĕrnọ̤on. Hēre wạs̱ ȧ sēasȯn fōr ŧhŏught. Hēre wạs̱ ȧ tīme fōr ŧhĕ ĕnjoymĕnt ŏf ŧhĕ beaūtĭes̱ ŏf nātūre. Frēe frŏm ŧhĕ bŭstle ănd tŭrmoil ŏf prātĭṉg ɕŏxɕŏmbs̱, ḡạ̤udў fŏps, ănd ɕlămōroŭs bĭḡŏts, wē ḡāve oursĕlves̱ ŭp tọ̤ ŧhĕ ɕŏntĕmplātiȯn ŏf ŧhĕ wȯrks ŏf Nātūre, ănd ŏf ŧhĕ wĭsdȯm ănd ḡọodnĕss ŏf Hĭm whọ̤ fōrmed ŧhĕm. Whọ̤ ɕăn lọok ŭpŏn sō beaūtĭfụl ȧ lăndsɕāpe ănd nŏt ădōre Hĭm whọ̤ fōrmed ĭt? Whọ̤ ɕăn ĕnjoy sŭɕh dēlīghts—sŭɕh ȧ fēast ŏf ŧhĕ beaūtĭfụl ănd ḡọod—ănd nŏt lọok ŭp tọ̤ Hĭm whọ̤ ĭs̱ ŧhĕ ạ̤uŧhȯr ŏf ŧhĕm wĭŧh ŧhănks-ḡĭvĭṉg ănd wĭŧh prāis̱e? Whọ̤ ɕăn cŏntĕm-plāte ŧhĕ beaūtĭfụl ănd ŧhĕ ḡọod ĭn ŧhĕ ŏbjĕɕts ŧhăt ĕnvīrȯn ŭs, ănd nŏt ădōre ŧhĕ Arɕhītĕɕt whō ɕŏnçēived ănd făshiȯned ŧhĕm.

Bȳ ŧhĕ nātĭves̱, wē äre tōld ŧhăt ŧhĕ wĕaŧhĕr ŏf ŧhĕ fōrenọ̤on ŏf ŧhĕ 25th wạs̱ ŧhĕ hŏttĕst ĕvĕr knōwn ŭpŏn ŧhĕ Atlăntĭɕ ɕōast. At onçe, mănў ŏf ŧhĕ sēafārĭṉg mĕn prēdĭɕtĕd ŧhăt ĭt wọuld bē fŏllōwed bȳ ȧ çȳɕlōne—ōr ȧ "hărrўɕāne" ăs̱ ŧhe̱y ɕạ̤ll ĭt. And ŧhe̱ir prē-

dĭcṭiȯns̱ wĕre vĕrĭfīed. Bēfōre ŧhĕ ɛlōs̱e ŏf ŧhĕ dāy, wē wĕre vĭsĭtĕd bȳ ȧ çȳɛlōne ŧhĕ līke ŏf whĭɛh I hăd nĕvĕr bēfōre sēen, ănd sŭɛh ăs̱ I hăd nĕvĕr rĕad ŏf. It wạs̱ tĕrrĭfĭɛ. To̤ dēsɛrībe ĭt ănd ĭts ĕffĕɛts wọuld rēquīre ȧ vŏlūme. Sŭffīçe ĭt to̤ sāy, whīle ĭt brŏught ŭs nō lŏss ĭt ăffōrdĕd ŭs mănȳ rĭɛh lĕssȯns̱. Sȯme ŧhŏught ŧhĕ därk dāy hăd ɛȯme, ănd bēg̃ăn to̤ ĕxămĭne ŧhe̱ir fāiŧh. Bŭt ŧhĕ stūdĕnts äre sō ĭnūred to̤ whạt sȯme ɛạll dăṅġĕr ŧhăt ŧhe̱y lọok ŭpŏn ŧhĕ wīldĕst plāy ŏf ŧhĕ ĕlēmĕnts wĭŧh ɛŏmpōs̱ūre ănd dēlīght. Cŏnsēquĕntlȳ, to̤ ŧhōs̱e tĕrrĭfĭɛ pēals ŏf ŧhŭndĕr ŧhăt māde ŧhĕ ĕarŧh vībrāte ăs̱ ĭf ĭt wạs̱ sŭffĕrĭṉg ăn ĕarŧhquāke, ŧhe̱y g̃āve ăn ăttĕntĭve ănd stūdĭoŭs ēar. Whīle sȯme sŏught ŧhĕ ĭnnĕrmōst rēçĕssĕs̱ ŏf buĭldĭṉgs̱, ănd ŧhĕ mōst sēɛlūdĕd plāçĕs̱ to̤ shiēld ŧhe̱ir eȳes̱ frŏm ŧhĕ blīndĭṉg g̃lāre ŏf ŧhĕ fiērçe līghtnĭṉg, ŧhĕ stūdĕnts lọoked out ŏf ŧhĕ wĭndōws̱ ĭn stūdĭoŭs ɛŏmpōs̱ūre. To̤ ŧhĕ swēepĭṉg wĭnd ŧhăt prŏstrātĕd trēes̱, tōre ŭp fĕnçĕs̱ ănd blew down ōr ɛărrĭed ȧwāy buĭldĭṉgs̱, ŧhe̱y g̃āve stūdĭoŭs ăttĕnṭiȯn.

Antĭçīpātĭṉg ȧ sēvēre g̃āle, ȧbout 6 ō'ɛlŏck, our hōst, Căptaĭn Chădwĭck, hăd ădvīs̱ed ŭs to̤ tāke down our tĕnts, ănd p[illegible]k ŧhĕm ănd

our vălūâbles âwāy, ănd thĕn ĭnvītĕd ŭs tọ ăeçĕpt thĕ ūse ŏf thĕ house ĭn whĭeh hē lĭved bŭt â few wēeks bēfōre. Thĭs fāvòr wē kēenlў ăpprēçĭātĕd ănd heărtĭlў ăeçĕptĕd. As thĕ buĭldĭng wạs lĕss thăn â hŭndrĕd yärds âwāy wē ēasĭlў ănd qụĭcklў trănspōrtĕd our ĕffĕets ĭntọ ĭt. Nōr dĭd wē ăeeŏmplĭsh our wòrk tọo soon. Whĕn thĕ lâst ărtĭeles wĕre brŏught ĭn, thĕ stōrm bēgăn. At fĭrst thĕ rāin fĕll ĭn tŏrrĕnts; bŭt thĕ wĭnd waṣ stĕadў. Soon thĕ wĭnd bēeāme flạwў ănd thĕ āir ạlmōst ăs därk ăs nīght. Thĕn fŏllōwed thŭndĕr thăt mādе thĕ ĕarth vībrāte lĭke ăn ĕarthqụāke, ănd lĭghtnĭng thăt I fēared wọuld eạuse pĕrmânĕnt blĭndnĕss. Thĕ săsh ŏf thĕ wĭndōws răttled sō härd thăt I thŏught thĕ glâss wọuld bē brōkĕn out. Thĕ house rŏckeđ vĭōlĕntlў, ănd twīçe wē fĕlt thĕ wĕst ĕnd ŏf ĭt lĭftĕd frŏm thĕ foundāțiòn. Lĭghtĕd ŭp bў thĕ flăshĕs ŏf lĭghtnĭng thĕ āir sēemed tọ bē fụll ŏf dŭst, săṇd, lēaves, lĭmbs ŏf trēes ănd thĕ lĭke. Indēed, dēstrŭeṭiòn sēemed tọ prēvāil.

Fōrtūnātelў fŏr ŭs, thĕ buĭldĭng ĭn whĭeh wē wĕre, waṣ buĭlt bў thĕ U. S. Gŏvĕrnmĕnt fŏr â lĭfe prēsĕrvĭng stāțiòn. It waṣ bŭt one stōrў hĭgh, 36x18 fēet, buĭlt ŏf thĕ bĕst ŏf

hărd pīne, fĭlled ĭn wĭth brĭck ănd stăndĭng wĭth ȧ wĭndōwlĕss ĕnd tōwärd thĕ southwĕst, —thĕ quärtĕr frŏm whĭch thĕ çȳclōne cāme. Althō new, thĕ buĭldĭngs ŏf Bāy Hĕad, ȧ lĭttle bēlōw ŭs, ănd out ŏf thĕ çĕntrȧl trăck ŏf thĕ çȳclōne, sŭffĕred sēvērelȳ. Sō dĭd thōse ăt Point Plĕasȧnt ănd Mănȧsquăn, färthĕr down. At thēse plāçĕs, sȯme buĭldĭngs wĕre ĕntīrelȳ dēmŏlĭshed.

Thĕ bĕlt cȯvĕred bȳ thĭs çȳclōne wȧs nărrōw—nŏt mōre thăn tĕn mīles wīde, ĭn thĕ wīdĕst plāçe; ănd ĭn mănȳ plāçĕs lĕss thăn two mīles wīde. It bēgăn ŭpŏn thĕ 40° părăllĕl ŏf lătītūde, ĭn Pĕnnsȳlvānĭȧ, nŏt fär wĕst ŏf thĕ Dĕlȧwāre Rĭvĕr. It fŏllōwed, ĕxçĕptĭng slīght vārĭāṭiȯns, thĭs părăllĕl ȧcrŏss N. J., ănd out ōvĕr thĕ ōçeȧn ăs fär ăs hĕard frŏm. As ĭt moved, ĭt ĭncrēased ĭn vīōlĕnçe ŭntĭl ĭt rēached thĕ sēa. Fōrtūnātelȳ, mŭch ŏf ĭts cōurse ĕxtĕndĕd thro thĕ pīnes ŏf N. J., ănd dĭstrĭcts nŏt mŭch ĭmproved.

Thĕ flawȳ wĭnd thăt caused our shĭpwrĕck ăt ȧbout 1 ō'clŏck, P. M., wȧs bŭt ăn ĭnĭṭiȧl movemĕnt ŏf thĭs tĕrrĭfĭc çȳclōne.

OCEANPORT, N. J.,
2 A. M., JUNE 27, 1882.

Upŏn grounds ōwned by thĕ vĕnĕrable Edmond Wĕst, nēar thĕ tōll-gāte ŭpŏn thĕ pīke, wē pĭtcheđ our tĕnts lăst ēvĕnĭng ăt 7 ō'clŏck. Thĕ sīte ĭs ĭn ăn ŭnfĕnçeđ grōve—ŭmbrāgeoŭs ănd plĕasănt. At onçe wē prōçēedĕd tŏ prēpāre sŭppĕr, ănd dŏ thĕ ēvĕnĭng chōres pēculĭăr tŏ tĕnt lĭfe. Indŭstrў ănd sўstĕmătĭc prōçedūre wĕre ĕvĕrўwhĕre ăppărĕnt. In dūe tīme, vōrāçioŭs ăppētītes wĕre sătĭsfĭed ănd thĕ tāble fŭrnĭtūre ănd thĕ cūlĭnārў ăppărātŭs plāçeđ awāy. Thĕre sēemed tŏ bē ăn abŭndançe ŏf hūmor; ănd mĭrthfŭl cŏnvĕrsāțion mādе thĕ sēasŏn pass plĕasăntlў. Bŭt, almōst bēfōre thĕ glōamĭng hăd mĕrged ĭntŏ därknĕss ŭpŏn our blănkĕts wē ĕxtĕndĕd our lĭmbs, ănd soon bēcāme ŏblĭvĭoŭs ŏf all thăt hăd ĕngāged ŭs dūrĭng thĕ dāy. Tŏ quiĕt thĕ nĕrves ănd tŏ ĭnsūre slēep, thĕ vōcāțion ŏf thĕ dāy hăs bēen mōre pōtĕnt thăn pŏppў, măndrágōrá, chlōrál, ōr ănў drowsў sўrŭp ĭn thĕ world. And how swēet thĭs slēep! How quiĕt thĭs rēpōse! In ēithĕr tĕnt, nŏt thĕ stĭr ŏf á lĭmb nōr á hĕavў brĕath! As gĕntle ĭs thĕ brēathĭng ăs ĭn thĕ rēpōse ŏf slēepĭng bābes. How

fēlĭçĭtoŭs thĕ sŭeçĕssĭon,—ŭpŏn à dāy ŏf rĭeh-ĕst vie-wĭng tŏllōws à nĭght ŏf swēetĕst slēep.

Thĕ sīte ŭpŏn whĭeh our tĕnts äre pĭtcheđ ĭs à plāçe thăt wē hăve ŏftĕn ŏccūpĭed bēfōre. Thĕ ġĕntlemăn ōwnĭng ĭt, ąlthō ĭn hĭs 92d yēar, ĭs nŏt mōre vĕnĕrable bȳ rēasŏn ŏf hĭs ġreāt āġe, thăn bȳ hĭs ŭnfeigned ġĕnĕrŏsĭtȳ. Bōrn ăt Wŏlf Hĭll, Mŏnmoŭth Countȳ, N. J., A. D., Märeh 9th, 1791, thĭs măn hăs sō strĭctlȳ lĭved ĭn ăccōrdançe wĭth thĕ ląws ŏf hĭs bēĭng, thăt, tọ-dāy hĭs pōrt ĭs ērĕct, hĭs ġāit fĭrm ănd stātelȳ, hĭs cŏuntēnançe fụll, hĭs fāçe ŭnshrĭvĕled, hĭs eȳe lŭstroŭs, ănd hĭs voiçe frēe frŏm thăt härshnĕss sō chărăcterĭstĭc ŏf thĕ āġĕd. And yĕt, thĭs măn dŏes nŏt lọok yoŭng. In hĭs vĭsāġe māy bē rĕad thĕ trĭāls, thĕ ĕxpērĭĕnçĕs ănd thĕ wĭsdŏm thăt eăn bē pŏssĕsseđ ōnlȳ bȳ thōse whọ hăve lĭved nĭnetȳ ŏdd yēars. Chēerfụl ănd ăffable, ġēnĭăl ănd cŏmplāisant, hē sēems à păràgŏn tọ whĭeh māy bē tŭrned thĕ stūdĭoŭs ăttĕntĭon ŏf bōth thĕ yoŭng ănd thĕ ōld. Fōr fōur sŭeçĕssĭve yēars hăve I elăspeđ thĕ hănd ŏf thĭs ōld ġĕntlemăn. Invārĭablȳ, wąrm ănd cŏrdịal hăs bēen hĭs grăsp, ănd wąrmlȳ hăs hē wĕlcŏmed ŭs tọ hĭs grōve. Wē vĕnĕrāte thĕ ōld măn.

May he long live, and may Providence mete out to him all the changes that may happen to him during these seniles years in merçy, and may he, at last, "enter into that rest that remaineth to the people of God."

Monday dawned cloudy and cool. The duties of the morning were attended to in proper time and in proper manner.

As the time was drawing near when we would break camp, each be gan to adjust his little effects, and to store them in safe places in the carry-all. Breakfast was soon ready, and with Academic piety we assembled around the long table to eat our last meal by the sea. We felt somewhat sad at the thought that we must shortly leave the scenes that had afforded us so many delights. But the "vim" of the students was not yet all gone. Wit, mirth, the pensive remark and the philosophic observation, each in turn arose from the various parts of the circle. Appetites were good and all ate as tho each one was preparing for some ardious task.

When our effects were packed in the carry-all, and we were ready to take a parting view, all went down to the strand. A while, in

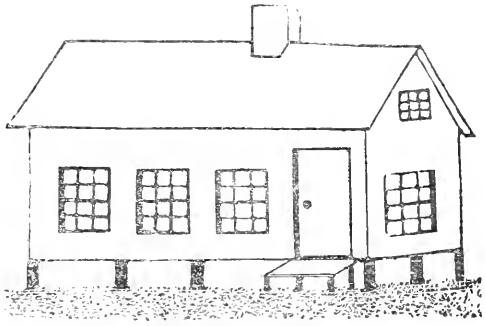
sīlĕnçe wē ḡāzed ōvĕr ŧhĕ dēep,—ăt sāil ănd stēamĕr, ăt wāves̱ ănd sprāy, ăt ḡŭll ănd ēaḡle; —ănd ŧhĕn ɕăstĭṉg one lŏṉgĭṉg, lĭṉḡĕrĭṉg lọok bēhīnd, wē stärtĕd fōr ŧhĕ ɕărrў-a̤ll ănd spĕd ȧwāy to̤ view ŧhĕ vĭllāġĕs̱ bȳ ŧhĕ sēa.

Alŏṉg ŧhĕ ɕōast, ăt shōrt ĭntĕrvȧls̱, frŏm Bärnĕḡăt Bāy to̤ Shrewsbŭrў Rĭvĕr, hăve sprŭṉg ŭp, wĭŧhĭn ŧhĕ lȧst few yēars̱, ȧ nŭmbĕr ŏf ŧhrīvĭṉg vĭllăġĕs̱. Thēs̱e vĭllāġĕs̱ äre fär-fāmed ăs̱ rēs̱ōrts fōr sŭɕh ăs̱ sēek, dūrĭṉg hŏt wĕaŧhĕr, ŧhĕ sēa brēeze. Dūrĭṉg ŧhĕ Sŭmmĕr, ŧhe̱y äre vĭsĭtĕd bў ŧhousȧnds̱. Frŏm a̤ll pärts ŏf Amĕrĭɕȧ ŧhe̱y ɕȯme; nōr ĭs̱ ĭt ŭnɕŏmmȯn to̤ fīnd hēre, wĭŧh ȧ spăn ŏf hăndsȯme hōrsĕs̱, ŧhĕ ŏpūlĕnt Eṉglĭshmȧn ănd Gĕrmȧn, ŧhĕ Rṳssịȧn ănd Austrĭȧn.

Thēs̱e vĭllāġĕs̱ äre a̤ll tāstefụllў plănned ănd wĕll buĭlt. Mănў ŏf ŧhĕm dĭsplāy ŧhĕ bĕst spĕçĭmĕns̱ ŏf mŏdĕrn äɕhītĕɕtūre, ănd ŧhĕ ɕhoiçĕst wȯrk ĭn lăndsɕāpe ḡärdĕnĭṉg. Indēed, ŧhe̱y a̤ll ȧbound ĭn ŧhĕ ōrnāte. Whạtĕvĕr wĕalŧh ɕăn ĭndūçe ŧhĕ ärɕhītĕɕt, ŧhĕ ĕnġīnēer, ŧhĕ mēɕhănĭɕ to̤ do̤, hăs̱ bēen dȯne ĭn plănnĭṉg ănd buĭldĭṉg ŧhēs̱e vĭllāġĕs̱. Hĕnçe, ŧhe̱y ȧbound ĭn ŧhĕ rĭɕhĕst lĕssȯns̱ fōr

thĕ stūdĕnt ŏf ärchītĕctūre, ănd thōse who cŭltīvāte à tāste fŏr thĕ beaūtīfŭl.

To vĭsĭt thĕ "vĭllāgĕs by thĕ sēa" was à pärt ŏf thĕ prōgrăm ŏf our tour. To thĭs wŏrk wē dēvōtĕd thĕ ĕntīre dāy ŏf June 26th, 1882. Dūrĭng thĕ vĭsĭt, wē drōve lēisūrely thro all thĕ prĭncĭpăl strēets, vĭsĭtĕd all thĕ pŭblĭc plāçĕs ănd cŏnvĕrsed frēely wĭth sŭch ăs wē thŏught lĭkely to gĭve ŭs sŭch ĭnfōrmātĭon ăs wē sŏught. And, ăs dūrĭng our vĭsĭt wē viewed ănd ĕxămĭned ēach one rāthĕr clōsely, I vĕntūre to sŭbmĭt à dēscrĭptĭon ŏf ēach.

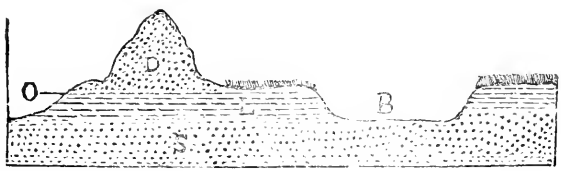


First House at Bay Head.

Bāy Hĕad, thĕ mōst soŭthĕrn ŏf thĕ vĭllāgĕs, ĭs thĕ yoŭngĕst ŏf thĕ sĭstĕrs. It ĭs lōcātĕd ŭpŏn ōr àbout thĕ 40° părăllĕl, bētwēen Bärnēgăt Bāy ănd thĕ ōçeăn. Whĕre now thĭs

vĭllāġe stănds, ĭn 1879 thĕre wąs bŭt one house. Thĭs wąs ōwned ănd ŏcĕūpĭed bȳ Căptaĭn Elĭjah Chădwĭck, whọ thĕn ōwned ąll thĕ lănd nọw pŏssĕssed bȳ thĕ Bāy Hĕad Cọmpănȳ. It wąs ą one-stŏrȳ buĭldĭng 18x36 fēet, hăvĭng thrēe rọoms ŭpŏn thĕ fĭrst flōor, —ăn ōpĕn lŏft ąbóve. It stănds ŭpŏn thĕ mĕadōw fär băck frŏm thĕ dūne; ōr ąbout mĭdwāy bētwēen thĕ dūne ănd thĕ dŏck ŏn Bärnē ġąt Bāy. It wąs buĭlt ĭn 1874.

In thĕ mónth ŏf Octōbĕr, 1878, thĕ Căptaĭn sōld 12 ācres ŏf lănd ăt $110 ăn ācre, tọ ą fĭrm cŏnsĭstĭng ŏf Wm. Hărrĭs, Edwärd Howe ănd D. H. Mount. Of thĭs cọmpănȳ D. H. Mount ĭs Prĕsĭdĕnt.



Cut Showing the Relation of the Dune to the Ocean and to Barnegat Bay, at Bay Head.

D. Dune.
O. Ocean level at high water.
B. Barnegat Bay.
L. Stratum of turf extending beneath the dune; grass clad to the west of the dune and west of the Bay, up to the pine forest.
S. Sand of the Miocene Epoch.

Dūrĭn̲g ŧhĕ wĭntĕr, ŧhĕ mĕmbĕrs̲ ŏf ŧhĭs fĭrm ērĕ€tĕd two̤ hous̲ĕs̲. Gĕn. Kärġe̲ ănd Mrs. Văndōrĕn pŭr€hāsed lŏts ănd buĭlt ŧhĕreŏn. Thēs̲e fōur hous̲ĕs̲ wĕre lō€ātĕd ŭpŏn ŧhĕ dūne, ănd €ŏmmăndĕd ăn ĕxçĕllĕnt view ŏf ŧhĕ sēa. Thŭs ĕlēvātĕd, ŧhe̲y wĕre fănned bȳ ĕvĕrȳ brēeze. Thĕ stȳle ŏf är€hītĕ€tūre ĭs̲ mŏdĕrn ănd sĭmple, ănd wĕll ădăptĕd fōr Sŭmmĕr rēs̲ōrts. Indēed, ŧhe̲y äre mŏdĕl-buildĭn̲gs, pĕr€heđ ŭpŏn ĕxquĭsĭte sītes. Thĕ măn ĭn quĕst ŏf ȧ plāçe to̤ buĭld ȧ Sŭmmĕr €ŏttāġe bȳ ŧhĕ sēa, wạs̲ sūrelȳ ĭn fāvȯr ŏf Bāy Hĕad, ĭf onçe hē €ọuld stănd ŭpŏn ŧhĕ pĭăzzȧ ŏf ēiŧhĕr ŏf ŧhēs̲e €ŏttāġĕs̲ ănd sŭrve̲y ŧhĕ ĕnvīrȯns̲. Lūred bȳ sŭ€h prŏspĕ€ts ănd ȯŧhĕr ĭndūçemĕnts, mănȳ pŭr€hāseđ lŏts; ănd dūrĭn̲g ŧhĕ wĭntĕr ŏf '80 ănd '81, ŧhĕre wĕre buĭlt 8 €ŏttāġĕs̲ ănd ȧ bōardĭn̲g house wĭŧh ȧ €āpāçītȳ fōr 70 ḡuĕsts. Dūrĭn̲g ŧhĕ fŏllōwĭn̲g yēar, 22 mōre €ŏttāġĕs̲, ȧ ḡrōçērȳ ănd ȧ drŭḡ stōre wĕre buĭlt; ănd ăt ŧhĕ prĕs̲ĕnt ŧhe̲y äre buĭldĭn̲g ōr ŧhĕre äre €ŏntrăe€tĕd fōr buĭldĭn̲g 10 mōre €ŏttāġĕs̲ ănd ȧ €hŭr€h, sō ŧhăt ĭn Māy, 1883, Bāy Hĕad wĭll hăve ăt lēast 48 €ŏttāġĕs̲, 2 stōres̲, ȧ €hŭr€h, ănd ȧ bōardĭn̲g house, ŧhĕ Lāke Cŏttāġe, ŧhăt fŭrnĭshĕs̲ bōard

ăt $2 pĕr dāy. And, dūrĭng thĕ bāthĭng sēasŏn, ĭt wĭll prŏbablў hăve à pŏpūlāțiŏn ŏf nŏt lĕss thăn 1,000 sōuls; fŏr, dūrĭng thăt sēasŏn, ĕvĕrў cŏttāġe wĭll tāke ąll thĕ ġuĕsts they căn ăccŏmmŏdāte.

Thĕ strēets ŏf Bāy Hĕad hăve bēen sŭrveyed ŭpŏn thĕ rĕctăngūlàr plăn. Thĕ māin ăvēnūe ĕxtĕndș nēarlў părăllĕl wĭth thĕ strănd. Părăllĕl tŏ thĭs ăvēnūe, ŏn ēithĕr sīde, ĕxtĕndș ŏthĕr ăvēnūeș. Thēșe părăllĕl ăvēnūeș ăre crŏsseđ, ăt rĭght ăngleș, bў strēets ĕxtĕndĭng frŏm thĕ dūne tŏ thĕ bāy. Thĕ mōst soŭthĕrn ŏf thēșe, knōwn ăș Chădwĭck strēet, ĕxtĕndș frŏm thĕ dūne tŏ thĕ dŏck, ŏn Bärnēgăt Bāy. Tŏ thĕ rĕgūlărĭtў ŏf thĭs sŭrvey, thĕ vĭllāġe ōweș mŭch ŏf ĭts beaūtў.

Exçĕptĭng à few houșeș thăt ăre buĭlt ŭpŏn thĕ dūne, thĕ vĭllāġe stăndș ŭpŏn à lōw plāin thăt ġentlў slōpes frŏm thĕ dūne tŏ thĕ Bāy. Thĕ dūne hēre ĭș àbout twĕntў fēet hĭgh. Mŭch ŏf thĭs plāin ĭș bŭt à few fēet—frŏm one tŏ fĭve—àbŏve thĕ ăvĕrāġe wătĕr märk ŏf Bärnēgăt Bāy. Thŭs sĭtūātĕd, ĭt ĭș cŏmplētelў shĕltĕred bў thĕ dūne frŏm thĕ drĭvĭng stōrmș, sō ŏftĕn bēatĭng frŏm thĕ sēa.

Thĕ ărchĭtĕctūre ŏf Bāy Hĕad, wĭth sŏme

ĕxçĕptiŏns, ĭs rēçĕnt. I say rēçĕnt, fōr, ĭn dēserĭbĭng wŏrks ŏf ärchĭtĕctūre, wē mŭst dĭstĭnguĭsh bētwēen thōse buĭldĭngs thăt äre thĕ rēsŭlt ŏf thĕ wĕll ĕstăblĭshed prĭnçĭples ŏf thĕ ärt ŏf Archĭtĕctūre ăs dēvĕlŏped bȳ mŏdĕrn prōgrĕss ĭn thĕ sciĕnçĕs, ănd ăs ăpplĭed tọ ĕdĭfĭçĕs buĭlt wĭthĭn thĕ prĕsĕnt çĕntūrў, ănd thōse thăt äre thĕ rēsŭlt ŏf vărĭoŭs ĭntĕntiŏnăl dēvĭăţiŏns frŏm thēse wĕll ĕstăblĭshed prĭnçĭples. Thĕ ärchĭtĕcts ăt Bāy Hĕad hăve nō serŭples ĭn ĭgnōrĭng thĕ ūsāġĕs ŏf thĕ bĕst buĭldĕrs whọ wŏrk nŏw, ōr whọ wŏrked bŭt ă few yĕars āgō. In cŏnsēquĕnçe, ĭn thĕ buĭldĭngs hēre, wē sēe new dēsīgns,—ă few ŏf whĭch äre nēat ănd sŭbstăntiăl; bŭt mōre frēquĕntlў they äre ŏdd ănd flĭmsў—ŏftĕn grōtĕsque ănd făntăstĭc—fōrms thăt äre dĕstĭned tọ bē ephĕmĕrăl.

In hĕr băthĭng ground, Bāy Hĕad hăs ăn ădvăntāġe ōvĕr ăll thĕ rĕst ŏf thĕ vĭllāġes bȳ thĕ sēa. Thĕre ĭs nō ŏthĕr plāçe ăt whĭch thĕ băthĭng ĭs sō sāfe. Thĕ bŏttŏm ŏf thĕ sēa hēre slōpes ăwāy sō ġĕntlў ănd sō ūnĭfōrmlў thăt wĭth ēase ănd săfetў one căn wāde fär out ĭntọ thĕ ōçeăn. At fĭrst, thĕ wạtĕr ĭs vĕrў shăllōw. At twĕntў yärds frŏm thĕ

shōre, ĭt ĭs ŏftĕn nŏt mōre thăn twŏ fēet dēep ănd at fōrtў yärds ăwāy, nŏt mōre thăn fōur fēet dēep. Indēed, ĭn gĭvĭng stūdĕnts lĕssŏns rĕspĕctĭng thĕ nātūre ŏf wāves, ĭn ōrdĕr thăt thĕ wątĕr māy bē ŭp tŏ their shōuldĕrs, ăs they stănd ērĕct, I hăve ŏftĕn found ĭt nĕçĕssārў tŏ gō eightў yärds, ōr mōre, frŏm thĕ shōre. Stăndĭng hēre, bŭt slīght ŭndertōw ĭs pĕrçēived, ēvĕn ĭf thĕ sea ĭs a lĭttle rough. Whĕn thĕ wāves wĕre 3 fēet hīgh, I have stŏod ŭp ŏn a sĭte 50 yärds frŏm shōre, ĕxpērĭĕnçĭng a vĕrў slīght ŭndĕrtōw ănd ĭn pĕrfĕct săfetў. Tŏ bē sūre, ĭn wāves ŏf thĭs heīght, ēvĕn a gŏod swĭmmĕr ĭs lĭftĕd wĭth mōre vīōlĕnçe thăn ĭs ăgrēeable; ănd hē hās vĕntūred about ās mŭch ăs sĕnsĭble mĕn äre wĭllĭng tŏ rĭsk ēvĕn fōr sçĭĕnçe sāke.

Undĕrtōws, ăs I hăve shown, äre thĕ cŭrrĕnts ŏf wątĕr thăt rēsŭlt frŏm wāves thăt hăve brōkĕn ŭpŏn thĕ shōre. The wątĕr fōrmĭng thĕ cŭrrĕnt, cąllĕd ăn ŭndĕrtōw, wąs brŏught lăndwärd ănd pŭshed fär ŭpŏn thĕ strănd bў a fōrçe thăt ĭmpĕlled thĕ lăst, ōr a prĭōr wāve. Thŭs ĕlēvātĕd, bў ĭts weight ănd mōbĭlĭtў, ĭt ĭnclĭnes tŏ mŏve down thĕ slōpĭng bēach ĭntŏ thĕ sēa. Dēsçĕndĭng thĕ shōre, thĕ cŭrrĕnt

fōrmed ăcquīres̱ ḡreāt vēlŏçĭtў. Bŭt, ēre ĭt hăs̱ dēsçĕndĕd fär, ĭt mēets ăn ădvȧnçĭṉg wāve whōs̱e vēlŏçĭtў ĭs̱ mŭch lĕss. Impĕlled bȳ thĕ fōrçe ḡāined ĭn thĕ dēsçĕnt ŏf thĕ slōpĭṉg strănd, thĕ sēawärd cŭrrent clāims̱ thĕ sŭrfȧçe ŏf thĕ bŏttȯm ŏf thĕ sēa, whīle thĕ slōwĕr mo̤vĭṉg bŏdў—thĕ ădvȧnçĭṉg wāve—rīs̱ĕs̱ ȧbȯve ĭt, ănd mo̤ves̱ ŏn ōvĕr ĭt ŭntĭl ĭt strīkes thĕ shōre ănd spĕnds̱ ĭts fōrçe ĭn thĕ ăct ŏf pŭshĭṉg ĭtsĕlf fär ŭp the strănd. At thĭs jŭnctūre, thĭs sāid ădvȧnçĭṉg wāve, ĭn ĭts rētŭrn to̤ thĕ sēa, bēcȯmes̱ ănȯthĕr ŭndĕrtōw. And sō ŏf ĕvĕrў ȯthĕr lănd-wa̤shĭṉg wāve whĕre thĕ wa̤tĕr ĭs̱ dēep.

To̤ fōrm ăn ŭndĕrtōw two̤ thiṉgs̱ äre ĕssĕnṭiȧl: 1st. Thĕ wa̤tĕr mŭst bē sĕvĕrȧl fēet dēep. 2d. Thĕ bŏttȯm ŏf thĕ ōçeȧn ănd thĕ shōre ŭpŏn whĭch thĕ wāves̱ breāk mŭst bē stēep.

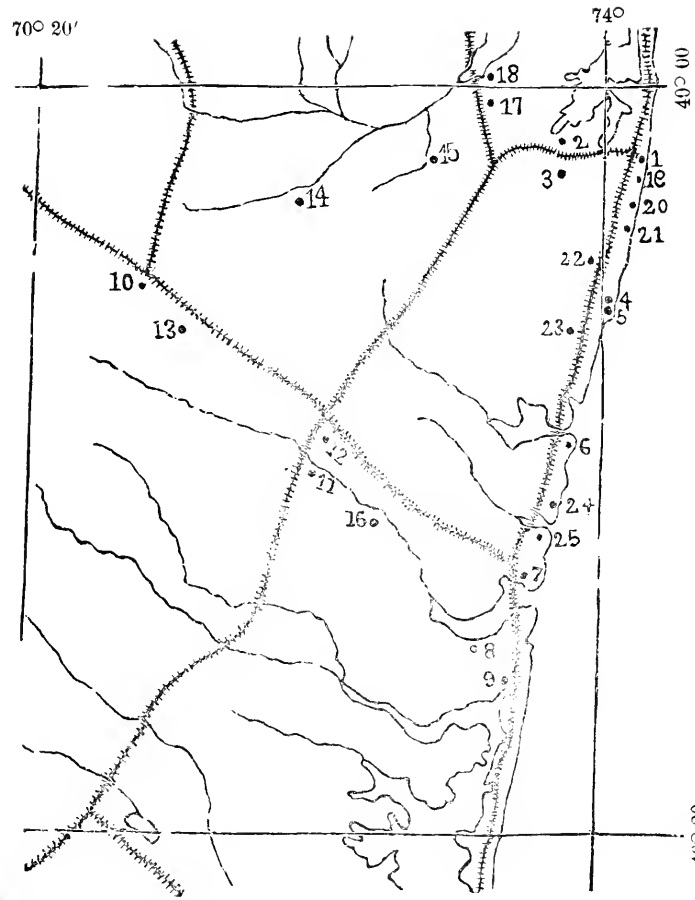
A lăndwärd mo̤vĭṉg wāve, ĭn shăllōw wa̤tĕr, ōvĕrlȳĭṉg ȧ ġĕntlў slōpĭṉg sēa bŏttȯm, bȳ frĭcṭiȯn ŭpŏn thĕ bŏttȯm, ănd thĕ powĕr nēedĕd to̤ ăsçĕnd thĕ plāin, slōwlў ĕxpĕnds ĭts fōrçe, ănd lo̤s̱ĕs̱ ĭts vēlŏçĭtў, ŭntĭl ĭt ĭs̱ sprĕad ĭn ȧ thĭn strātŭm ŭpŏn thĕ strănd. In rētŭrnĭṉg, thĕ wa̤tĕr ŏf thĭs wāve, dēsçĕndĭṉg thĕ

gĕntlў ĭnclīnĭng plāin, gāins bŭt lĭttle fōrçe ănd lĭttle vēlŏçĭtў. Hĕnçe, ĭn cāse ĭt pàssĕs bēnēath ăn ădvànçĭng wāve thĕ ŭndĕrtōw ĭs sō fēeble thăt ĭt scārçclў ăttrăcts thĕ ăttĕntĭon ŏf thĕ bāthĕr.

Bŭt wāves sŭcçēed cach ŏthĕr ăt ăn ăpprŏxīmāte rĕgūlărĭtў. Thăt ĭs, they fŏllōw cach ŏthĕr ăt ăpprŏxīmātelў rĕgūlàr ĭntĕrvàls. Thēse ĭntĕrvàls, ūsūàllў, àre sŭch thăt ŭpŏn à gĕntlў slōpĭng strănd, thĕ ădvănçĭng wāve cómes ĭn sō fär thăt ĭt mēets thĕ rētrēatĭng wāve ŭpŏn grounds ōvĕr whĭch thĕ wạtĕr ĭs sō shăllōw thăt thĕ twọ wāves cŏllīde, ōr ĕlse, ĭn thĕ ăct ŏf pàssĭng ŭndĕr thĕ ădvànçĭng wāve, thĕ rētrēatĭng wāve ĭs sō mŭch ĭmpēdĕd bў frĭctĭon àgāinst thĕ bŏttŏm ŏf thĕ sēa ŭpŏn ĭts ŭndĕr sŭrfàçe, ănd frĭctĭon àgāinst thĕ wāve ŭpŏn thĕ ŭppĕr sŭrfàçe, thăt ĭts fōrçe ĭs răpĭdlў ĕxpĕndĕd, ănd ĭts vēlŏçĭtў sō rētärdĕd thăt ĭt bēcómes ăn ŭndĕrtōw sō fēeble thăt ĭts trănspōrtĭng pŏwĕr ĕffĕcts bŭt lĭttle.

Anóthĕr ădvăntāge pēculĭàr tọ Bāy Hĕad ĭs ĭts fine fāçĭlĭtĭes fōr sāilĭng. Bärnēgăt Bāy, fōr beaūtў ŏf scēnērў ănd fāçĭlĭtў ŏf sāilĭng fōr pleāsūre, ĭs nŏt ēqụàled ălŏng thĕ New

Jĕrseў coast. Thĕ ŭppĕr ärm ŏf thĭs bāy ĕxtĕnds bĕtwēen Bāy Hĕad ănd thĕ grēāt pīne fŏrĕst. At thĕ foot ŏf Chădwĭck strēet ĭs à dŏck ăt whĭeh, ăt all tīmes, pärtĭes eăn sēeūre sāfe yachts, mănned bў ĕxpērĭĕnçeđ eăptaĭns. Pleāsūre sāilĭng wĭll ălwāys bē à lēadĭng fēatūre ĭn thĕ rounds ŏf lĭfe ăt thĭs vĭllāge.



MAP OF LONG BRANCH AND VICINITY.

1. Long Branch.
2. Oceanport.
3. Eatontown.
4. Asbury Park.
5. Ocean Grove.
6. Ocean Beach.
7. Manasquan.
8. Point Pleasant.
9. Bay Head.
10. Lower Squankum.
11. Squankum.
12. Farmingdale.
13. Blue Ball.
14. Colt's Neck.
15. Tinton Falls.
16. Freehold.
17. Shrewsbury.
18. Red Bank.
19. West End.
20. Elberon.
21. Oceanville.
22. Deal
23. Neptune.
24. Spring Lake.
25. Sea Girt.

From Bay Head to this place, the road, excepting a few hundred yards, is excellent. Indeed, its equal is seldomly found. It is a sand pike, straight, well rounded from side to side; and as level, in its course, as roads ever are. Upon this, our teams moved as rapidly as any one could desire; and the steadiness of the carry-all was remarkable.

The scenery along this road is varied. Now the way is skirted with a peaty marsh, covered with coarse grass, or tall rushes; now with a dry sandy plain, studded with pitch pine, brambles, dwarf oak, huckleberries, and lichens; here is a small pond whose surface is bespangled with the most beautiful water lilies; there is a copse of heath-worts and brambles, as unintwining as the swamps of Florida; here stretches away a beautiful field of wheat or red clover, there a garden luxuriant with the choicest vegetables; here a neatly dressed lawn of the brightest green, there a parterre of exquisite design; here a village of small, cozy cottages, there a group of palatial mansions; here a neat unpretentious inn with its plain porches and shady walks, to accommodate the frugal invalid, there the colossal

hōtĕl wĭth ĭts ōrnāte cŏlŭmns, ĭts stūpĕndoŭs pĭăzzȧ, ĭts ĭmpōsĭng vērăndȧs ănd ĭts broȧd prŏmĕnȧdes tọ ăccŏmmōdāte thĕ cāse-lōvĭng ănd plĕȧsūre-sēekĭng ŏpūlĕnt. Thŭs, cŏntrȧst sŭcçēds cŏntrȧst, ĭn sŭch ȧ plēasĭng wāy, thăt thĕ eȳe nĕvĕr wēarĭes ănd thĕ mĭnd nĕvĕr sāţĭātes.

On our wāy, wē crŏssed Mănāsquȧn Rĭvĕr. Thĭs strēam, ōr rāthĕr, thĭs ĕstūārў, ĭs nēarlў ȧ mīle wīde; bŭt, ĭt ĭs quīte shăllōw. Its dĕpth ĭs mŭch ĭnfluĕnçed bȳ thĕ tīde. Whĕn thĕ tīde ĭs ĭn, ĭt ĭs quīte dēep; bŭt whĕn thĕ tīde ĭs out, ĭt ĭs sō shăllōw thăt one căn wāde ĭt. Ovĕr thĭs rĭvĕr ĭs ăn ōpĕn brĭdġe frŏm whĭch one cŏmmănds ăn ĕxtĕnsĭve view ŏf thĕ rĭvĕr, ănd ŏf thĕ sŭrroundĭng cŏuntrў. Hēre thĕ lăndscāpe ĭs beaūtĭfụl,—ĕspĕçiàllў thăt pärt ŏf ĭt thăt ĕxtĕnds wĕstwärd, ōr ŭp thĕ strēam. Fär ŭp,—ăs fär ăs one căn sēe,—thĕ broȧd sheet ŏf wạtĕr grāçefụllў bĕnds. Skĭrtĭng thĭs, thĕ pīne clăd bănks grāçefụllў wīnd. In thĕ strēam ärc nūmĕroŭs ĭslănds,—smạll, çĭrcŭlär ănd cōvĕred wĭth grȧss thăt ĭs glŏssў grēen. Thĕ sŭrfȧçe ŏf thĕ strēam ĭs smọoth ănd sĭlvĕrў, lĭke ȧ pŏlĭshed mĭrrŏr. Upŏn thĭs strēam ärc mănў ȧ smạll sāil ănd mănў

smaller crafts. Surely this silver sheen, set with these beautiful islands, bordered by these graceful banks, and bespangled with these snow white sails, form a landscape that can never fail to please.

From this bridge eastward, we look out thro the Manasquan Inlet over the sea. This prospect is sublime. At first, like viewing a mountain vista, the eyes scan, at your feet, the wide spreading estuary, that so gracefully narrows to be continuous with that beautiful inlet that intersects the graceful dune. Then, peering out thro this inlet, we look upon that mountain of waters that we call the sea,—so round, so graceful, so silvery, so majestic, that it arouses and expands the soul till the spectator stands in pensive transport.

Upon the east side of the open bridge, at the distance of a few hundred yards, the estuary is spanned by the railroad bridge—a stupendous structure. Over this bridge trains are passing every few minutes. But for the grandeur and sublimity of that part of the landscape above alluded to, this bridge and these passing trains alone would invite any

lover of the beautiful, and form a theme worthy of the pen of the best rhetorician.

MANASQUAN.

Squan Village, now called Manasquan, is the oldest of all the villages by the sea. In early times, this was the watering place—the Summer resort. And it was far famed. Although it has not kept abreast with other villages by the sea, yet it is a place of beauty. It is regularly planned and well ornamented. The streets are broad, skirted with trees, and kept neat and clean; the houses are ornate, the lawns tasteful. Here are large stores, large shops, industrious mechanics and accommodating merchants. Here is done a large amount of business. Here dwell not a few men of enterprise. Of this village the population is about six hundred.

The signs of the times indicate that early in the history of this village there settled here families whose respective and distinctive peculiarities are expressed in their significant names—the Sharps, the Catchems and the Skinners. That they have been prosperous

fămĭlĭes thĕre ĭs nō doubt; ănd thăt thĕ trāits whĭch gāve tọ thōse fămĭlĭes sŭch ĕxprĕssĭve nămes hăve bēen pĕrsĭstĕnt, thĕre ĭs ăn ăbŭndăncẹ ŏf ĕvĭdĕncẹ. Whĕthĕr ăt ănў tĭme thĕ plāçe ănd vĭçĭnĭtў hăs cŏnsĭstĕd māinlў ŏf mĕmbĕrs ŏf thēse fămĭlĭes, thĕre ĭs nōt dēçĭsĭve ĕvĭdĕncẹ. Bŭt, bē thăt ăs ĭt māy, wē äre ĭnclĭned tọ thĭnk thăt ĭn thĕir prōcrēāțiọn, thĕir ŏffsprĭngs wĕre mōstlў--pĕrhăps ĕntĭrelў--gĭrls whọ, bў mărrўĭng lŏst thĕir nāme sō sĭgnĭfĭcănt ŏf thĕir chărăctĕr, bŭt trănsmĭttĕd tọ, ănd ĭntĕr-dĭffūsed thĕ fămĭlў chărăctĕrĭstĭcs ŭnălloẏed, ămŏng thĕ rĭsĭng gĕnĕrāțiọn. Tọ thĭs nōțiọn, wē äre thĕ mōre ĭnclĭned bēcạuse ŏf thĕ făct thăt whĭle thēse sĭgnĭfĭcănt nāmes dọ nŏt ăppēar ŭpŏn thĕ sĭgn bōards ŏf busĭnĕss hoụsĕs, thĕ trāits ŏf chărăctĕr ĕxprĕssed bў thēse sāid nāmes äre pătĕnt ĭn sō vĕrў măny prōprĭētŏrs, pärtnĕrs, clĕrks, mēchănĭcs, ănd ēvĕn ĭn thĕ lābŏrĕr.

Thĕ dēsçĕndănts ŏf thēse ănçiĕnt fămĭlĭes sēem tọ bē rēmärkăblў ăpt ĭn stămpĭng thĕir ĭmprĕss ŭpŏn ạll whọ dọ busĭnĕss fōr thĕm. Indēed, thĕy sēem tọ bē vĕrў ăpt, ănd vĕrў suạsĭve tēachĕrs--ĕspĕçiăllў ĭn thĕ mĕrcăntĭle ănd thĕ mēchănĭc ärts. Fōr, frŏm hoẉ dĭs-

tant a neighborhood he comes, or of what blood he is bred, the young clerk, or the apprentice to these business men, is soon, not only possessed of the knowledge of the principles upon which these arcient people do business, but also imbued with that spirit and zeal that makes his success interior only to that of his employer and teacher.

The descendants of these worthy families have not all settled down in, or near, their native village. Doubtless, some of them have gone far away, and have given origin to some phases of business seen in some houses in distant places. But, in the main, it seems they were a beach-loving class; and the most of those in whom the paternal characteristics were most persistent, migrated to sites up and down the beach. These seem to have been very prolific and to have been as persistent in transmitting the family characteristics as were their great-grandsires. Indeed, in every village by the sea, there seems to be so many of this sort, that one has to put his imagination, and his credulity, upon a stretch to believe that the population are not all descendants of these three primitive families.

At Mănȧsquȧn äre bōardĭn̲g hou̲s̲ĕs̲ ĭn plĕntў. Indēed, kēepĭn̲g bōardĕrs̲ ĭs̲ ŧhĕ lēadĭn̲g ĭndŭstrў. Wĭŧh nōtȧble ĕxçĕpṭiȯns̲, ĕvĕrўbŏdў kēeps bōardĕrs̲. To̤ ŧhĭs ĭs̲ dēvōtĕd ŧhĕ lärġe house ănd ŧhĕ sma̤ll; ŧhĕ pălȧçe ănd ŧhĕ ɛŏttāġe; ŧhĕ mănṣiȯn ănd ŧhĕ hŭt; ŧhĕ ɛăbĭn ănd ŧhĕ ro̤okĕrў; ŧhĕ stȳ ănd ŧhĕ kĕnnĕl. Bĭḡ trŭnks äre sēen ĭn a̤lmōst ĕvĕrў house. And, ŧhe̲y äre ŏftĕn ŧhĕ ōrnāmĕnt ŏf ŧhĕ băck yärd, ōr ŧhĕ stōre fŭrnītūre ŏf ŧhĕ out shĕds̲. Indēed, bȳ ŧhōs̲e who̤ kēep bōardĕrs̲, ŧhĕ bĭḡ trŭnk ɛăn bē sēen ăs̲ fär ăs̲ ɛăn ȧ flŏck ŏf pĭġeȯns̲ bȳ ŧhĕ pĭġeȯn trăppĕr. Nōr ĭs̲ ŧhĕ bĭḡ trŭnk lo̤oked̄ ŭpŏn wĭŧh lĕss ănxīĕtў ŧhăn ŧhĕ pĭġeȯn flŏck ĭs̲ bȳ ŧhĕ nĕt tĕndĕr. If one wĭshĕs̲ to̤ hăve spĕçiȧl rēspĕɛt pāid to̤ hĭm, lĕt hĭm ḡō ĭnto̤ one ŏf ŧhēs̲e bōardĭn̲g vĭllāġĕs̲ bȳ ŧhĕ sēa wĭŧh ȧ bĭḡ trŭnk. Hē cănnŏt fāil. Upŏn hĭs̲ ădvĕnt, ɛātĕrĕrs̲ wĭll bē ăs̲ nūmĕroŭs ăs̲ flīes̲. And how pōlīte! And how ăɛɛŏmmōdātĭn̲g! And, ŧhĕ bĭḡḡĕr ŧhĕ trŭnk, ŧhĕ lōwĕr ŧhĕ ɛātĕrĕrs̲ bow. One ɛăn härdlў tĕll how wȯrŧhў ŏf rēspĕɛt hē ĭs̲, ŭntĭl hē hăs̲ ḡŏne ĭnto̤ sȯme vĭllāġe bȳ ŧhĕ sēa, wĭŧh ȧ bĭḡ trŭnk.

Mănȧsquȧn vĭllāġe ĭs̲ sĭtūātĕd ŭpŏn ŧhĕ nōrŧh bănk ŏf ŧhĕ Mănȧsquȧn Rĭvĕr. It ĭs̲

sŭrrounded by a district of country that is as level as the floor. This land is occupied by men who cultivate the soil with great skill and care. Cabbage, beets, radishes, lettuce, turnips and tomatoes are planted in the place of corn. They grow luxuriantly, and each field looks like a splendid garden. As the soil is sandy, it is easy to till; and it matures the crops early. Here nothing goes to waste. There seems to be a market, and a demand, for everything. This is made by the business of boarding so many from the cities.

To supply the tables of those who keep boarders, there is a constant demand for the freshest and the best. And these farmers seem to give their attention to producing such things as they can sell at home. However, I guess that the money which the farmer gets for his produce is kept in his pocket. Surely he does not spend it in erecting fine buildings, nor repairing such as are not fine. While they who keep boarders, or are mechanics, or merchants, have fine houses and nice grounds, these farmers, as a rule, live in poor, small buildings that are constructed upon no prin-

çīple ŏf tāste; nōr äre ŧhĕ bärns̱ ănd out-buĭld-ĭṉgs̱ ănў bĕttĕr.

Mōst ŏf ŧhĕ lănd, ĕxtĕndĭṉg frŏm Mănȧs-quȧn to̤ Oçeȧn Grōve, ĭs̱ sĭmīlȧr to̤ ŧhăt ăround Squȧn Vĭllāġe; ănd, to̤ ȧ ḡreāt ĕxtĕnt, ĭt ĭs̱ tĭlled wĭŧh ŧhĕ sāme ɛrŏps. Oɛɛāṣiȯnȧllў ŧhĕre ĭs̱ ȧ swa̤mp,—ȧ piēçe ŏf lōw, wĕt ḡround, ɛȯvĕred wĭŧh pīnes̱, sɛrŭb ōaks, brămbles̱, ɛăr-rĭŏn plȧnts, wīld ɛrănbĕrrĭes̱ ănd ŧhĕ līke. Thĕre ĭs̱ ăt ŧhĕ lēast, one pēat märsh. Thĭs ĭs̱ ȧbout ȧ quärtĕr ŏf ȧ mīle wīde. Thĕ pēat rānġĕs̱, ĭn dĕpŧh, sō fär ăs̱ I hăve ĕxămĭned ĭt, frŏm two̤ to̤ fōur fēet. In quȧlītў, ĭt ĭs̱ ĕxçĕl-lĕnt. Abȯve ănd bēlōw ŧhĭs pēat märsh ŧhĕre äre ȧ few pătɛhĕs̱ ŏf whīte sănd. Thēs̱e äre po̤or, ĭndēed; ănd ăs̱ ȧ rṳle, nŏt ɛŭltīvātĕd.

EAST POINT PLEASANT.

A mīle nōrŧh ŏf Bāy Hĕad ĭs̱ ȧ new vĭllāġe ɛa̤lled East Point Plĕas̱ȧnt. At ŧhĭs plāçe ĭs̱ ȧ bōardĭṉg house ɛălɛūlātĕd to̤ ăɛɛŏmmōdāte ȧbout one hŭndrĕd bōardĕrs̱. As̱ yĕt ŧhĕre äre ōnlў ȧ few ɛŏttāġĕs̱. Thĕ lōɛāṭiȯn ŏf ŧhĭs vĭllāġe ĭs̱ fāvŏrȧble, ănd ĭn ȧ few yēars̱, ŧhĕ nŭmbĕr ŏf splĕndĭd ɛŏttāġĕs̱ ănd ĭmpōs̱ĭṉg

hōtĕlş wĭll sō ĭnĸrēase thăt thĭs plāçe wĭll rănk wĭth thĕ ōldĕst vĭllāgĕş bȳ thĕ sēa.

SEA GIRT.

Sēa Gĭrt ĭş ȧ smȧll vĭllāge buĭlt nēar thĕ sīte ŭpŏn whĭĸh Cŏmmōdōre Stŏcktŏn's rĕşīdĕnçe bȳ thĕ sēa ūşed tŏ stănd. It ĭş ŭpŏn ȧ săndў, ōr grăvĕllў ĕmĭnĕnçe thăt ōvĕrlo̤oks thĕ sēa. Frŏm ȧll pärts ŏf thĕ vĭllāge thĕ prŏspĕĸt ĭş ĸŏmmăndĭng. Upŏn thĕ mōst ĕlēvātĕd pärt ŏf thĕ ĕmĭnĕnçe stănds ȧ hōtĕl, frŏm thĕ pĭăzzȧş ŏf whĭĸh, ōvĕr thĕ dēep, one's prŏspĕĸt ĭş lĭmĭtĕd ōnlў bȳ thĕ powĕr ŏf vĭşiŏn. Frŏm thēşe pĭăzzȧş ĭş gāined ȧ mōre ĕxtĕndĕd, ănd ȧ grănder vieẇ, ŏf thĕ sēa thăn I hăve hăd frŏm ănў ŏthĕr plāçe.

At thĭs plāçe, thĕ wȧtĕr ĭn thĕ wĕllş ĭş ĕxçĕllĕnt, ănd thĕ nātĭve grōveş vĕrў ĭnvĭtĭng. Hēre ăre ĕxçĕllĕnt drīveş. Hēre ĭş thĕ plāçe fōr hăndsŏme tēamş ănd splĕndĭd vēhĭĸleş. Indēed, Sēa Gĭrt ĭş ȧ hĭgh tōned plāçe.

Thĕ māin hōtĕl ăt Sēa Gĭrt ĭş ăn ĭmpōsĭng strŭĸtūre, sō lōĸātĕd ăş tŏ ĸŏmmănd thĕ grănděst prŏspĕĸt ōvĕr thĕ sēa. It ĭş ărrănged tŏ ăĸĸŏmmōdāte one hŭndrĕd ănd sĭxtў bōard-

ĕrs; ănd, ạlthō thĕ prīçe ŏf bōard ĭs $3.00 pĕr dāy, ĕvĕrў rọom ĭn thĕ house ĭs ŏccūpīed.

The bāthĭng ground, ăt thĭs plāçe, ĭs gọod; ănd ĭt ĭs vĕrў pŏpūlăr ămŏng thĕ färmĕrs ŏf Mŏnmoŭth ănd Oçeăn Countĭes. Upŏn ă çĕrtaĭn dāy, thĕ fĭrst Wĕdnesdāy ĭn Augŭst, I bēlīēve, thousănds frŏm thĕ sŭrroundĭng coŭntrў ăssĕmble hēre ănd hăve ă gĕnĕrăl wạsh, ănd ă jŏllў tīme. Thĭs dāy ĭs lōcăllў stўled "Thĕ shēep wạshĭng dāy." It hăs bēen çĕlēbrātĕd, I ăm tōld, frŏm thĕ ĕarlĭĕst tīmes.

SEA PLAIN.

Sēa Plāin cŏnsĭsts ŏf ă nŭmbĕr ŏf beaūtĭfụl cŏttāgĕs, ĭs lōcātĕd ŭpŏn ă beaūtĭfụl plāin thăt strĕtchĕs ăwāy frŏm thĕ sēa,—băck tọ thĕ dĭstănçe ŏf ă mīle ōr mōre. It ĭs lāid out wĭth mŭch tāste, ănd ĭs dĕstīned tọ bē ă fāvŏrīte plāçe fōr thĕ ŏpūlĕnt.

OCEAN BEACH.

Oçeăn Bēach, nŏrth ŏf Sēa Plāin, ĭs ă yoŭng, thrĭftў vĭllāge, pŏssĕssed ŏf mănў ĕlēmĕnts ŏf beaūtў. Thĕ ărchĭtĕctūre ŏf thĕ

rĕsīdĕnçĕs ĭs tāstefụl; thĕ lạwns, broạd ănd wĕll tĕndĕd; thĕ strēets, wīde ănd wĕll grādĕd; ănd ạll ĕlse prēsĕnts ăn ăppēarạnçe ŏf thrĭft.

OCEAN GROVE.

Oçeạn Grōve ĭs ạ plāçe tọo wĕll knōwn tọ nēed ạ dēserĭptiọn. Its pŏpūlāṭiọn ĭs ạbout 1500. It ĭs rĕgūlạrlў ănd tāstefụllў plănned, ĕnclōsed wĭth ạ fĕnçe, ạdōrned wĭth mŭch nātĭve fŏrĕst, cŏntāins măny hăndsọme dwĕllĭngs, sĕvĕrạl lạrġe hōtĕls ănd ạ grēạt măny tāstefụl pŭblĭc buĭldĭngs. It ĭs ạ fāmoŭs tĕntĭng grọund. It ĭs ōwned ănd mănāġed bў thĕ Mĕthŏdĭst pēople, ănd ĭs thĕ plāçe ăt whĭch ạre thĕ grēạt cămp mēetĭngs. Sọmetĭmes, ăs măny ăs 12,000 pēople ăttĕnd thēse cămp mēetĭngs. Hēre quĭĕtūde reigns. Evĕrўthĭng ĭs ĭn ōrdĕr, ănd thĕ busĭnĕss ŏf thĕ plāçe ĭs lĭke clŏck wọrk.

ASBURY PARK.

Asbŭrў Pärk ĭs ạ vĭllāġe thăt prēsĕnts mŭch vārĭētў ănd măny cŏntrăsts. Thĕ plāin

ŭpŏn whĭch ĭt ĭs̱ buĭlt, strĕtchĕs̱ frŏm Dēal Lāke, ŏn thĕ nōrth, to̤ Wĕsleў Lāke ŏn thĕ south—ȧ dĭstȧnçe ŏf ȧ mīle ănd ȧ hȧlf. Thĕ plāin ŏn whĭch ĭt ĭs̱ buĭlt, ĭs̱ beaūtĭfụl. Frŏm thĕ lāke ŏn ēithĕr sīde, ĭt rīs̱ĕs̱ ŭp ḡrădūȧllў. Its ḡreātĕst ĕlēvāṭiȯn ĭs̱ nŏt fär frŏm thĕ çĕntĕr. It ĭs̱ wĕll drāined; ănd, ĕxçĕpt whĕre clēared fōr buĭldĭṉgs̱, la̤wns̱, &c., &c., ĭt sŭstāins̱ ȧ ḡrōwth ŏf nātĭve pīne, ōak, māple ănd thĕ līke. Thĕ soil ĭs̱ săndў ōr ḡrăvĕllў, ănd nŏt wĕll ădăptĕd to̤ ḡrȧss.

Thĕ bēach ăt As̱bŭrў Pärk ĭs̱ beaūtĭfụl ănd wĕll sūitĕd to̤ bāthĭṉg. Alŏṉg ĭt äre nūmĕroŭs cŏnvēnĭĕnçĕs̱ fōr thĕ plĕas̱ūre-sēekĕr, ănd thĕ lŏvĕr ŏf ēas̱e ănd cŏmfōrt. At two̤ plāçĕs̱ äre pāvĭlịȯns̱ buĭlt out ōvĕr thĕ sēa to̤ thĕ dĭstȧnçe ŏf one hŭndrĕd ănd twĕntў fēet. Thēs̱e pāvĭlịȯns̱ äre cŏvĕred wĭth ȧ sŭbstănṭiȧl rọof; äre strŏṉglў ḡuärdĕd wĭth bălŭstrādes̱, ănd äre prōvīdĕd wĭth chāirs̱, lounġĕs̱, bĕnchĕs̱ ănd sŭch ȯthĕr ūtĕnsĭls̱ ăs̱ cŏntrĭbūte to̤ thĕ cŏmfōrt ŏf sŭch ăs̱ wĭsh to̤ vĭsĭt thĕm ănd fōr ȧwhīle rēmāin thĕreŏn.

Lăndwärd ŏf thēs̱e pāvĭlịȯns̱ äre thĕ bāthĭṉg ro̤oms̱, ăs̱ they äre ca̤lled. Bŭt, they äre nŏt bāthĭṉg ro̤oms̱. Pēople bāthe ĭn thĕ sēa, ănd

thĕn ḡō ĭnto̤ thĕ ro̤oms̱ to̤ wạsh ănd chānġe thei̱r clōthes̱. The̱y äre wạshĭṉg ănd drĕssĭṉg ro̤oms̱, ēach one bēĭṉg ȧ kīnd ŏf lăvātōrў. The̱y äre ēas̱ў ŏf ăcçĕss, cŏnvēnĭĕntlў ărrānġed ănd snŭḡlў kĕpt. Of thĕm thĕre äre mōre thăn two̤ thousȧnd.

Abȯve ănd bēlōw thĕ pāvĭlịȯns̱ äre thĕ sītes ăt whĭch thĕ "bāthĕr" ḡōes̱ down ĭnto̤ thĕ sēa. Tnĕ ăpprōach to̤ thĕ wạtĕr ĭs̱ ēas̱ў ănd cŏnvēnịĕnt. Thĕ bŏttŏm ŏf thĕ sēa ĭs̱ smo̤oth, ănd slōpes ȧwāy ḡrădūȧllў. Hĕnçe, thēs̱e bāthĭṉg ḡrounds̱ äre ḡọod, mŭch rēs̱ōrtĕd to̤, ănd äre răpĭdlў ăcquīrĭṉg ȧ wīde sprĕad rēnown. Viewed frŏm thĕ pāvĭlịȯn, the̱y äre dēlīghtfụl. In thĕm, ŭpŏn ȧ clēar wạrm dāy, dūrĭṉg thĕ "bāthĭṉg sēas̱ȯn," māy bē sēen ȧ thousănd ăt ȧ tīme.

Părăllĕl to̤ thĕ bēach, ănd bŭt ȧ few fēet to̤ thĕ wĕst ŏf ĭt, ĕxtĕnds̱ Oçeȧn Avēnūe. It ĭs̱ wīde, cŏmmănds̱ ăn ĕxtĕnsĭve view ōvĕr thĕ sēa, ĭs̱ wĕll "bĕddĕd" ănd ĭs̱ ȧ sūpĕrb drīve. Alŏṉg thĕ wĕst sīde ŏf thĭs strēet äre fīne cŏttāġĕs̱ ănd lärġe hōtĕls̱. Hēre äre thĕ choiçĕst plāçĕs̱ fōr thōs̱e ĭn quĕst ŏf fīne scēnērў, thĕ frĕshĕst brēeze frŏm thĕ sēa, ănd ăn ŏppōrtūnītў to̤ sēe ȧ dāilў părāde ŏf fīne

carriages and handsome teams. Here are lodged the wealthy and the elite.

Parallel to this street, other thoroughfares extend from lake to lake. Of these, there are seven. Of the seven, Main street is the most westward, and it is the one on which the most business is done. On this street are large stores, fine shops, suitable markets, good hotels and the like. Here are obliging merchants, accommodating hucksters, complaisant landlords and busy mechanics. West of this street are scattered groups of buildings. In these dwell those whose appropriate name would be the Sharps, the Catchems and the Skinners. Here live such as thrive by dealing.

A little north of the center of Asbury Park is a beautiful sheet of water called Sunset Lake. Its banks are graceful, and, by the hand of the artist, are rendered ornate. Around this lake is a beautiful drive—wide, level and winding. Within the lake is an island. Upon this, is a very inviting ice cream garden,—much frequented by the epicure and the lovers of "quiet." On the south side, this island is reached by a bridge which extends from the foot of Grand Avenue; and

ŏn ŧhĕ nōrŧh sīde bȳ ȧ brĭdġe ŧhăt ĕxtĕnds̱ frŏm Păckȧrd Avēnūe.

Thĕ dēpōt ăt As̱bŭrȳ Pärk ĭs̱ ȧ stāṭiȯn ăt whĭɕh ĭs̱ dȯne ȧ ḡreāt dēal ŏf bus̱ĭnĕss—mōre ŧhăn ăt ănȳ ȯŧhĕr plāçe ălŏṉg ŧhĕ bēaɕh. Thĕ ḡrounds̱ ŭpŏn whĭɕh ĭt ĭs̱, äre spāçioŭs ănd ɕlēan. Thĕ buĭldĭṉgs̱ äre lärġe ănd ɕŏnvēnṭĕnt. Around ŧhĕm, ăt ŧhĕ ădvĕnt ŏf ŧhĕ trāins̱, äre ḡăŧhĕred ĭn ȧ lŏṉg, çĭrɕlĭṉg rānġe, ŏmnĭbŭsĕs̱, stāġĕs̱, ɕōaɕhĕs̱, brĕtts, phāētȯns̱, bŭḡḡĭes̱ ănd vēhĭɕles̱ ŏf a̤lmōst ĕvĕrȳ ȯŧhĕr stȳle ŧhăt măn hăs̱ ĭnvĕntĕd. Hēre, ăt trāin tīme, ĭs̱ hŭrrȳ; hēre ĭs̱ bŭstle; hēre ĭs̱ ĕxçītemĕnt. Hēre mĕn, wọmĕn, ɕhĭldrĕn, ɕōaɕhmĕn, ɕlĕrks, ɕlowns̱, dăndĭes̱, fŏps, sĕrvȧnts, rĕsīdĕnts, ḡuĕsts ănd strānġĕrs̱ mọve ĭn ŧhrŏṉgs̱, ănd mĭx ŧhrọ ănd ŧhrọ līke swa̤rmĭṉg bēes̱.

Bŭt, whĕn ŧhĕ trāin hăs̱ bēen ḡŏne ȧbout fĭftēen mĭnūtes, one ɕọuld härdlȳ mŭstĕr ȧ ɕōrpōrȧl's̱ ḡuärd. Evĕrȳŧhĭṉg ĭs̱ quīĕt; ŧhĕre ĭs̱ härdlȳ ȧ măn tọ bē found. And, sō ĭt rēmāins̱ ŭntĭl tīme fōr ŧhĕ nĕxt trāin.

Thĕ çĭtīzĕns̱ ŏf As̱bŭrȳ Pärk äre vārĭoŭs. The̱y äre dīvĭsīble ĭntọ fīve ɕlȧssĕs̱. In ŧhĕ fĭrst ɕlȧss wē māy rănk a̤ll ŧhōs̱e whọ ōwn prŏpĕrtȳ ănd lĭve ŭpŏn ĭt pĕrĕnnĭȧllȳ. In ŧhĕ

sĕcond class, wē māy plāçe thōse who own rĕsīdĕnçes hēre, ănd ăre hēre dūrĭng thĕ warm wĕathĕr ōnlў. In thĕ thĭrd class, wē māy pŭt thōse who vĭsĭt thĕ plāçe ănd stāy ăs bōardĕrs dūrĭng thĕ hŏt wĕathĕr. In thĕ fōurth, wē māy rĕckŏn sŭch ăs çome to thĕ plāçe to do businĕss dūrĭng thăt sēason ĭn whĭch thĕ town ĭs fĭlled wĭth bōardĕrs. Thĕ fĭfth class ăre sŭch ăs ăre ĕmployed rĕgūlărlў —sŭch ăs clĕrks, mēchănĭcs, lābŏrĕrs, tēamstĕrs ănd thĕ lĭke, who māke thĕ plāçe their hōme.

Thĕ mĕmbĕrs ŏf thĕ fĭrst class, ăs a rule, ăre ĭndŭstrĭoŭs, ĕntĕrprīsĭng, ĭntĕllĭgĕnt, pōlīte ănd gĕnĕroŭs. They ăre sōçiăl ănd philănthrŏpĭc. They ăre thĕ sălt ŏf thĕ plāçe.

Thōse bēlŏngĭng to thĕ sĕcond class, ăs a rule, ăre ŏpūlĕnt, ĭntĕllĭgĕnt, ĭndŭstrĭoŭs, ŭrbāne, gĕnĕroŭs ănd bēnĕvōlĕnt. They ăre sŭch ăs ăre doĭng ăn ĕxtĕnsĭve businĕss ĭn thĕ crowdĕd çĭtĭes ŏf our nātiòn, ănd fēel thăt ĭt ĭs prŏpĕr thăt their fămīlĭes should ĕnjoy, dūrĭng thĕ hŏt wĕathĕr, bĕttĕr āir ănd mōre gēnĭăl ĕnvīrŏnmĕnts thăn ăre cŏmmŏn to çĭtĭes dūrĭng thĕ Sŭmmĕr mònths. They ăre sŭch ăs, gōadĕd ŏn bў thĕ prĕssūre ŏf busĭ-

nĕss dūrĭn̲g ŧhĕ sēas̲ȯn ŏf trāde, ōr, ōvĕrstŏcked̄ wĭŧh ɛāres̲ frŏm prōfĕssịȯnȧl ăvōɛāṭịȯns̲, ūs̲ūȧllў bēɛȯme tīred, ēnĕrvātĕd ănd rēlăxed̄ ăt ŧhĕ ădvĕnt ŏf ŧhĕ hŏt sēas̲ȯn ănd nēed, fōr rĕst ănd rēɛūpĕrāṭịȯn, sȯme ɋuīĕt plāçe wĭŧh ɛhēerfụl ĕnvīrȯns̲, plĕas̲ȧnt scēnērў, ġēnĭȧl ɛŏmpănў ănd ɛo̤ol, sālūbrīoŭs brēezĕs̲.

Dūrĭn̲g ŧhe̲ir sōjoŭrn ăt ŧhe̲ir sēasīde rĕsĭdĕnçĕs̲, ŧhe̲y äre ăffȧble ănd ɛŏmplāçĕnt, ɛhēerfụl ănd ḡāy. The̲y ĕmploy ŧhĕmsĕlves̲ ăt sŭɛh ŧhĭn̲gs̲, ănd ĭn sŭɛh wāys̲, ăs̲ bĕst ɛŏndūçe to̤ ȧ rēlăxāṭịȯn frŏm bus̲īnĕss ănd ȧ frēedȯm frŏm ɛāres̲. Thŭs, ŧhe̲y fāvŏr ŧhăt ɛŏndĭṭịȯn ŏf ŧhĕ sўstĕm ŧhăt ĭs̲ nĕçĕssārў to̤ buo̤ўȧnçў, rĕnōvāṭịȯn ănd ĭnvĭgōrāṭịȯn.

Thōs̲e ŏf ŧhĕ ŧhĭrd ɛlȧss äre ūs̲ūȧllў wĕll to̤ do̤ pēople who̤ hăve bēɛȯme tīred frŏm sĕdūloŭs ăttĕnṭịȯn to̤ bus̲ĭnĕss; ōr, who̤ hăve bēen prŏstrātĕd bȳ dĭsēas̲e; ōr, who̤ wĭsh to̤ sēe ŧhĕ wāys̲ ŏf ŧhĕ vĭllāġĕrs̲ bȳ ŧhĕ sēa, ănd ɛăn bē ȧwāy frŏm hōme bŭt fōr ȧ shōrt sēas̲ȯn. In ŧhĕ sōçịȧl çĭrɛle, ăs̲ ȧ rụle, ŧhe̲y äre pōlīte, ġĕnĕroŭs, ĭntĕllīġĕnt ănd ɛŏmplāçĕnt. The̲y äre frụḡȧl ĭn ŧhe̲ir bōardĭn̲g ēɛŏnōmў, mŏdērāte ĭn drĕss, ănd çĭrɛŭmspĕɛt ĭn ŧhe̲ir dēpōrtmĕnt. Wĭŧh ŧhĕm, tīme ĭs̲ spĕnt ĭn sŭɛh

ȧmūsemĕnts, ĭn sŭ~~c~~h spōrts, ōr ĭn sŭ~~c~~h ĕmplo~~y~~mĕnts, ăs̱ ~~c~~ŏndūçe to̤ ȧ rēlăxāṭiȯn frŏm ~~c~~āre, ȧ frēedȯm frŏm ănxīētў, ȧ rēliēf frŏm hărăssĭṉg pāins̱ ănd mĕntȧl tĕnṣiȯn, ănd tĕnd to̤ ~~th~~ĕ rĕnōvāṭiȯn ŏf ~~th~~ĕ bŏdў ănd ~~th~~ĕ mīnd.

In ~~th~~ĕ fōur~~th~~ ~~c~~lȧss äre ~~th~~ōs̱e who̤ ~~c~~ȯme to̤ ~~th~~ĕ plāçe to̤ trăffĭ~~c~~, ōr to̤ wȯrk, whīle ~~th~~ĕ plaçe ĭs̱ fĭlled wĭ~~th~~ vĭsĭtȯrs̱ ănd bōardĕrs̱. To̤ ~~th~~ĭs ~~c~~lȧss bēlŏṉg ~~th~~ĕ Shärps, ~~th~~ĕ Căt~~c~~hĕms̱, ănd ~~th~~ĕ Skĭnnĕrs̱, ănd ~~th~~e̱ir rĕlȧtĭves̱, ~~th~~ĕ Do̤lĭttles̱. Of ~~th~~ēs̱e, sȯme äre sŭ~~c~~h ăs̱ ~~th~~ĭnk ĭt mănlў to̤ dēçēive ȧ lĭttle, to̤ drīve ȧ fra̤udūlĕnt bärḡaĭn, to̤ ~~c~~hēat ĭn the sāle ŏf sma̤ll ~~th~~ĭṉgs̱, to̤ ĕxtōrt ĭn rĕntĭṉg ŏn ~~s~~hōrt lēasĕs̱, to̤ dētāin trăvĕllĕrs̱, to̤ jŏckeў ĭn mākĭṉg pŭr~~c~~hāsĕs̱, ōr to̤ ḡĕt ĕxōrbĭtȧnt wāġĕs̱ fōr dōĭṉg sma̤ll jŏbs̱. Sȯme äre fĕllōws̱ who̤ hăve nŏt ȧ vĕrў ḡo̤od rĕpūtāṭiȯn ăt hōme,—sŭ~~c~~h ăs̱ trĭckstĕrs̱, pĕttў hŭckstĕrs̱, jŏckeў lĭvĕrўmĕn, ~~th~~rēe-çĕnt ~~s~~hŏpkēepĕrs̱, sĕvĕn-bȳ-nīne mē~~c~~hănĭ~~c~~s, ~~c~~hēatĭṉg ~~c~~ŏntră~~c~~tȯrs̱, dēçēivĭṉg pōrtĕrs̱, brăḡḡărt ~~c~~ōa~~c~~hmĕn, bōastfṳl hŏstlĕrs̱, ănd ~~th~~ĭrd-rāte lābōrĕrs̱.

Of ~~th~~ĭs ~~c~~lȧss, ~~th~~ĕ vĭsĭtōr, ŭpŏn ĕntĕrĭṉg ~~th~~ĕ plāçe, mēets ȧ ḡreāt mănў. Upŏn ĕvĕrў sīde hē ĭs̱ bēsĕt wĭ~~th~~ ~~c~~ro~~w~~ds̱ ŏf ~~th~~ĭs ĭmpūdĕnt ~~c~~lȧss. And, ă~~c~~~~c~~ōrdĭṉglў, ăt fĭrst, hē sŭspĕ~~c~~ts

that the village consists entirely of sharpers and scoundrels. Indeed, there are in Asbury Park, a plenty of them; of this kind, we think the place has its full share.

Asbury Park is a plaçe of rapid growth. In 1869, the plain on which the village now stands was a wilderness,—a jungle consisting of trees of pine, oak, maple and chestnut, so thickly interspersed with an undergrowth of brambles, huckleberry bushes, calico bushes, stag grer bushes, green briers and sarsaparillas that in many places, he who went thro it was obliged to go upon his hands and knees. There were about 500 acres of it, and not a building upon it. During that year, it was assessed at $15,000. In the latter part of 1870, James A. Bradley purchased the tract for $90,000. In 1879, it was assessed at $750,000. In 1880, it was estimated at $1,000,000; in 1882 it was assessed at $1,500,000.

Asbury Park has eight churches edifices—Episcopalian, Reformed, Baptist, Catholic, Methodist, Presbyterian and two colored.

In the place, is a Business College. There are also several private schools. The public school house, in this place, is large and

ĕonvēnĭĕnt. It ĕost nēarlў $10,000. Thĕ sehọol ĕmploys thĭrtēen tēaehĕrs ănd hăs 800 pūpĭls. In thĕ plāçe thĕre ĭs ȧ rēadĭng rọom thăt ĭs ōpĕn dūrĭng thĕ ĕntīre yēar. Thĕre ĭs ȧ newspāpĕr thăt hăs ȧ çĭrĕūlāțiọn ŏf 3500; ȧ pōst ŏffĭçe thăt dọes mōre buşĭnĕss thăn ănў ọthĕr pōst ŏffĭçe ăt ănў wạtĕrĭng plāçe ŏn thĕ ĕọntīnĕnt; twọ pŭblĭe hạlls, ănd ōvĕr 1,000 ĕọttāġĕs.

Thĕ pĕrmạnĕnt pŏpūlātiọn, ăs pĕr çĕnsŭs ŏf 1880, wạs 1,685; ĭn 1882 ĭt wạs 4,000. Dūrĭng thĕ Sŭmmĕr, thĕ pŏpūlāțiọn ĭs ġrēatlў ĭnĕrēaseđ. It ĭs ĕstĭmātĕd thăt nŏt lĕss thăn 20,000 pēople sōjoŭrn hēre dūrĭng thĕ hŏt wĕathĕr. Tọ ăĕĕŏmmŏdāte vĭsĭtōrs, lärġe bōardĭng houşĕs äre nēeđĕd. And thĕre äre ȧ plĕntў ŏf thĕm, ănd ŏf thĕ bĕst ōrdĕr. Thĕ lärġĕst bōardĭng house, thĕ Cōlemȧn House, kĕpt bў Mrs. Cōlemȧn, ăĕĕŏmmŏdātes 500. Thĕre äre ọthĕrs rāngĭng frŏm 400 down tọ 200. Bēsĭdes thēse, thĕre äre sĕōres ŏf lĕssĕr ĕāpăçĭtў, thăt ăffōrd ēqụăllў ăs ġọod, ĭf nŏt bĕttĕr, ădvăntāġĕs.

Aşbŭrў Pärk ĭs fāmoŭs fōr ĕxĕŭrşịọns. Frŏm thĕ bēgĭnnĭng ŏf hŏt wĕathĕr tĭll Autŭmnȧl frŏsts, ĕxĕŭrşịọns ărrīve ạlmōst dāilў.

As a rule, the excursion arrives in the morning and leaves in the evening. To accommodate excursionists, the cosmopolitan spirit of the citizens has induced them to make ample and suitable arrangements. Indeed, much of the fame and popularity of Asbury Park has arisen from the generosity of the citizens in providing for the excursionists who stay only a day. So popular are the excursions, and from so many places do they start, that by excursions 25,000 people have come to this famous resort in a single day.

Asbury Park is a place in which there are no houses let, to sell alcoholic intoxicating beverages. Hence we never see staggering or lolling drunkenness here. However large the crowds may grow, there is no chance for drinking and toxic revelry.

Asbury Park was incorporated March, 1874. From the beginning, the affairs of the place have been managed by Mr. James A. Bradley. This shrewd and philanthropic gentleman foresaw what the times needed; and, to effect what he conceived to be proper, he brought his purse and his intellectual powers to bear upon the pro-

jĕct. Thĕ rēsŭlt whĭch hē hăs ăchiēved, ĭs ŭnpărăllĕled ĭn hĭstōrў.

As wē dĭrĕctĕd our cōurse frŏm Asbŭrў Pärk tōwärd Dēal, wē pässed ä sīte lŏng tọ bē rēmĕmbĕred. It ĭs thĕ rĕsīdĕnçe ŏf Mr. Frănk Cōrlĭes. Cŏnçĕrnĭng thĭs plāçe, whīle ŭpŏn ä fōrmĕr trĭp, wē wrōte ăs fŏllōws:

"At hälf-päst sĭx ō'clŏck läst ēvĕnĭng, Jūne 14th, bў thĕ kīndnĕss ŏf Mr. Frănk Cōrlĭes, wē pĭtcheđ our tĕnts ŭpŏn ä vĕrў cŏnvēnịĕnt ănd ä vĕrў beaūtĭfụl spŏt. Thĭs spŏt ĭs ĭn thĕ grōve thät ĕnvīrŏns thĕ cŏttāge ŏf our ĕstēemed hōst, Mr. Frănk Cōrlĭes. Thĕ kīndnĕss ănd gĕnĕrŏsĭtў ŏf thĭs măn ĭs sŭch thät whĕn hē lĕarned thät wē wĕre ĭn quĕst ŏf ä sīte fōr ăn ĕnclămpmĕnt, hē ĭnvītĕd ŭs tọ ĕnclămp ŭpŏn hĭs lạwn, ănd ĕxtĕndĕd tọ ŭs thĕ prĭvĭlĕġe ŏf ūsĭng fōr our cŏmfōrt whạtĕvĕr wē cọuld ävāil ourselves ŏf. Thĭs ŏffĕr wē glădlў ăcçĕptĕd.

"Thĕ spŏt ĭs nŏt ōnlў beaūtĭfụl bŭt wĕll sūitĕd tọ tĕntĭng. Thĕ grōve ĭs dĕnse ănd shādў; ănd thĕ swạrd ĭs lĕvĕl, drў ănd nēatlў tĕndĕd. Hēre wē fĕlt ät hōme ănd pässeđ ä cŏmfōrtäble ănd plĕaşänt nīght.

"Ere wē hăd ọur tĕnts pĭtcheđ, thĕ gọod

lādy, Mrs. Cōrlies, extended to us an invitation to use for the night, the spare rooms in her mansion. This hospitality we keenly appreciated; but, owing to certain regulations, of long standing in the Academy, we were obliged to decline this generous offer and abide in our tents.

"But, long will we remember Mr. and Mrs. Cōrlies and their cottage upon the bank of Dēal Lāke.

"The cottage and environs which form one of Mr. Cōrlies' Summer residences, possess many features of attraction. This residence is situated in the north part of Asbury Park —somewhat removed from the busy part of the place and quite secluded.

"The grounds slope gradually and gracefully from one of the main avenues northward to the water in Dēal Lāke. Excepting where cut away for buildings and drives, it is beautifully wooded with native forest trees. These trees are trimmed to suit the exquisite taste of the landlord. Among these, about a hundred feet from the lāke, upon a slight eminence, the cottage stands. It is beautiful—a piece of exquisite architecture—designed and

buĭlt bȳ ŧhĕ ġĕntlemȧn whọ ōwns̱ ĭt. In ĭt ănd ăbo-ut ĭt, äre ạll ŧhĕ ɛŏnvēnịĕnçĕs̱ ŧhăt mŏdĕrn ärt ɛăn sŭpplȳ. Snŭḡlȳ nĕstled ĭn ȧ ḡrōve ŏf nātĭve ōak ănd pīne, whĕn vie-wed frŏm ŧhĕ lāke, ĭts ōrnāte ḡābles̱, spāçioŭs pīăzzȧs̱ ănd nēat bălŭstrādes̱, fōrm ȧ spŏt ĭn ŧhĕ lăndsɛāpe, ŧhĕ mōst beaūtĭfụl, ŧhĕ mōst ɛōzȳ ănd ŧhĕ mōst ĭnvītĭṉg. Evĕn ȧ ɛăsūȧl pȧssĕr, ăs̱ hē sāils̱ ŭp ŧhĕ lāke, ŏbs̱ĕrves̱ ŧhăt ŧhĕre ĭs̱ ŧhĕ sēɛlūdĕd vĭllȧ ŏf sȯme pĕnsĭve sōul,—ŧhĕre ĭs̱ ŧhĕ qu̧īĕt rēs̱ōrt ŏf sȯme fămīlȳ whọ lȯve tọ dēvōte ŧhe̱ir lēis̱ūre tọ ŧhŏught ănd pēaçefụl mĕdītāṭiȯn."

DEAL.

Dēal ĭs̱ bŭt ȧ hămlĕt. Sō äre Oçeȧnvĭlle ănd Elbĕrŏn. Alŧhō mŭɛh tạlked ŏf, ŧhĕ trăvĕlĕr pȧssĕs̱ ŧhrọ ŧhĕm ŭnɛŏnsçioŭs ŧhăt hē ĭs̱ ḡōĭṉg ŧhrọ ȧ sĕttlemĕnt ŧhăt hăs̱ ȧ nāme.

LONG BRANCH.

Lŏṉg Brănɛh ĭs̱ ȧ plāçe ŏf ḡrăndeūr,—ȧ plāçe ŏf splĕndŏr. Hēre ĕxçĕllĕnt drīves̱, ȧ spāçioŭs rōad, beaūtĭfụl lạwns̱, ĕxqu̧ĭsĭte pär-

tẹrres̱, nēat hĕdġĕs̱, ōrnāte fĕnçĕs̱, ärtĭstĭc cŏt-tāġĕs̱, ănd pălāṭiȧl rĕsīdĕnçĕs̱, cŏnspīre tọ māke ȧ lăndscāpe thăt ĭs̱ ūnïque ănd ḡrănd. Hēre ēach one sēems̱ tọ vīe wĭth thĕ ȯthĕr ĭn thĕ ăttĕmpt tọ ĕxpĕnd ŭpŏn hĭs̱ lạwns̱ ănd hĭs̱ mănṣiȯn, ŭpŏn hĭs̱ bärn ănd hĭs̱ stābles̱, hĭs̱ cōachĕs̱ ănd hĭs̱ phāētŏns̱, hĭs̱ härnĕss ănd hĭs̱ hōrsĕs̱, ạll thĕ mŏneў ĕxtrăvāḡȧnt cŏntrăctȯrs̱ căn ūs̱e.

Thĕ stȳle ŏf ärchītĕctūre ĭn Lŏṉg Brănch ĭs̱ vĕrў vārĭoŭs. As̱ ȧ rụle, ĭt ĭs̱ tāstefụl. In ĕvĕrў cāse thĕ buĭldĭṉgs̱ äre sŭch ăs̱ tọ shōw thĕ lăvĭsh hănd ŏf thĕ ōvĕr-ŏpūlĕnt. Thĕ fạults, ĭf ănў thĕre äre, cŏnsĭst ĭn ăn ĕxçĕss ŏf thĕ ōrnāte. And yĕt, ĭn nō cāse ĭs̱ thĕre ăn ăppēarȧnçe ŏf brĭllịȧnt shōw. Nōr dȯes̱ thĕ splĕndŏr ŏf thĕ ĕdīfĭçĕs̱ dēpĕnd ŭpŏn ḡāy cȯlȯrs̱. Althō ēach buĭldĭṉg īs̱ wĕll pāintĕd, thĕre ĭs̱ nŏt ȧ ḡāy cȯlȯred house ĭn thĭs vĭllāġe bȳ thĕ sēa. In thēs̱e buĭldĭṉgs̱, thĕ ĕlēmĕnts ŏf beaūtў cŏnsĭst ĭn thĕ cŏnvēnịĕnçĕs̱ ŏf thĕ ărrānġemĕnts, ĭn thĕ çĕntrȧl ōr ĕssĕnṭiȧl pärt ŏf thĕ buĭldĭṉgs̱, thĕ ădăptāṭiȯn ŏf thĕ sīte ŭpŏn whĭch thĕ ĕdīfĭçe stănds̱, thĕ strŏṉg ănd wĕll prōjĕctĭṉg rọof, thĕ ōrnāte ḡābles̱, thĕ cōzў rēçĕssĕs̱, thĕ spāçioŭs pīăzzȧs̱, thĕ ărtĭstĭc

vĕrăndȧs̱, ŧhĕ tāstefụl wĭndōws̱ ănd ŧhĕ ĭnvīt-ĭṉg ăpprōaɕhĕs̱.

Sō ɕārefụl ŏf vārīĕtў hăve bēen ŧhĕ ärɕhī-tĕɕts ŏf Lŏṉg Brănɕh ŧhăt, ĭn ŧhĕ ĕntīre plāçe, I ŧhĭnk ŧhĕre äre nŏt two̤ hous̱ĕs̱ ȧlīke. Thĭs, ŏf ĭtsĕlf, ĭs̱ ăn ĕlēmĕnt ŏf beaūtў. Eaɕh buĭldĭṉg rēliēves̱ ŧhĕ ȯŧhĕr. Hĕnçe ŧhăt līvelў ănd ĭnvītĭṉg ĕxprĕssịȯn ĕvĕrўwhĕre ăppărĕnt. Hēre nō one wēarĭes̱ wĭŧh vie-wĭṉg pălāṭịȧl rĕsīdĕnçĕs̱. Nūmēroŭs ăs̱ ŧhe̱y äre, ĕvĕry lŏvĕr ŏf ärɕhītĕɕtūre ĭs̱ ēăḡĕr to̤ sēe ŧhĕm a̤ll. Nōr dȯes̱ onçe vie-wĭṉg ŧhĕm sāṭĭāte. Hē who̤ hăs̱ onçe ɕrĭtĭɕȧllў vie-wed ŧhĕm, fīnds̱ hĭs̱ ăp-prēçĭāṭịȯn ŏf ŧhĕ ōrnāte ĭn ärɕhītĕɕtūre ȧwāk-ĕned, ōr fīred, ănd, ŭpŏn ȧ sĕɕȯnd vie-wĭṉg, hē ĕxpērĭĕnçĕs̱ mōre pleās̱ūre ănd sătĭsfăɕṭịȯn ŧhăn hē dĭd ăt fĭrst.

In ŧhĕ ärɕhītĕɕtūre ăt Lŏṉg Brănɕh, wē sēe vĕrў lĭttle ŏf ŧhōs̱e ōld Grēçịȧn stўles̱—ŧhĕ Dōrĭɕ, ŧhĕ Iŏnĭɕ ănd ŧhĕ Cŏrĭnŧhĭȧn; ōr ŧhĕ ōld Rōmȧn stўles̱—ŧhĕ Tŭsɕȧn ănd ŧhĕ Cŏm-pŏsĭte. Howĕvĕr, ĭn sȯme ŏf ŧhĕ lärġe hōtĕls̱, ŧhēs̱e ōld stўles̱—frēelў mŏdīfīed—äre ŧhĕ dŏmīnȧnt fēatūres̱. Indēed, to̤ ŧhĕ eўe ŏf ŧhĕ mŏdĕrn măn, ŧhĕ ōrdĕrs̱ ŏf ŧhĕ Grēeks ănd Rōmȧns̱ äre nŏt ĭn ḡọod tāste ĭn ănўŧhĭṉg, ĕx-

ȩĕpt ȧ pŭblĭc buĭldĭng. Thĭs nōtĭon, thĕ ărchĭtĕcts ŏf Lŏng Brănch hăve sĕdūloŭslў gŭărdĕd.

Thĕ ĕnvĭrŏns ŏf thĕ ĕdĭfĭȩĕs ŏf Lŏng Brănch ăre ĕxquĭsĭte. Fōr thĕ mōst pärt they cŏnsĭst ŏf lawns, drĭves ănd pärterres. Thĕ drĭves ăre ĕlēgănt, spācĭoŭs ănd cŏnvēnĭĕnt. They ăre sŏlĭd ănd clēan. In mănў cāsĕs, thĕre ĭs nō pärtĭtĭon fĕnȩe, ōr pärtĭtĭon hĕdġe, tŏ dĭvĭde one rĕsĭdĕnȩe frŏm ănŏthĕr. Sō, thĕ drĭves ŏf one plāȩe frequĕntlў ĭmpŏsēūlāte wĭth thōse ŏf ănŏthĕr. Thĭs ĭs ȧ thĭng ŏf beaūtў. It gĭves tŏ thēse nĕighbōrĭng rĕsĭdĕnȩĕs ȧ ġĕnĕroŭs, ȧ sōȩiȧl, ȧ friĕndlў ăppēaränȩe. It ĕnābles one tŏ sēe thăt thĕ pēople ŏf thĕ plāȩe ăre fĭlȧl, cŏūrtēoŭs ănd bēnĕvōlĕnt.

Thĕ lawns ăre lärġe, clōselў shōrn, vĕrў thrĭftў ănd vĕrў tāstefŭl ĭn păttĕrn. They ăre, ăs ȧ rule, quīte lĕvĕl. If they wĕre ȧ lĭttle mōre ŭndūlātĭng they would ăppēar mōre plēasĭng. Hŏwĕvĕr, thĕre ăre sō mănў ĕlē-mĕnts ŏf beaūtў ĭn thēse lawns thăt they nĕvĕr fāil tŏ plēase.

Thĕ pärterres ăre nūmĕroŭs ănd beaūtĭfŭl. They ăre sĕldŏmlў lärġe. Tŏ ȧ grēăt ĕxtĕnt, they cŏnsĭst ŏf fōlĭāġe plants. As rēspĕcts

păttĕrn, ŧhe̱y äre tāstefu̥l ănd ĕlē ḡȧnt. A few mōre flowĕrĭn̲g plȧnts, jūdĭçioŭslў ărrānġed, wo̥uld ădd ḡreātlў to̥ ŧhĕ beaūtў ŏf mănў ŏf ŧhēs̱e sūpĕrb rĕsīdĕnçĕs̱.

As̱ ȧ ru̥le, ŧhĕre ĭs̱ vĕrў lĭttle shrŭbbērў ăt Lŏn̲g Brăneh. Shāde trēes̱ äre vĕrў seārçe. Exçĕptĭn̲g ŧhĕ rĕsīdĕnçe ŏf Gĕnĕrȧl Grănt, ŧhĕre ĭs̱ seārçelў ănў shrŭbbērў ōr shāde trēes̱, ŭpŏn ănў ŏf ŧhĕ plāçĕs̱. Whȳ ŧhĭs nĕḡlĕet, I eănnŏt tĕll. Thĕ Gĕnĕrȧl's̱ plāçe sŭppōrts ȧ beaūtĭfu̥l ḡrōwŧh ŏf pīnes̱ ănd ōf nātĭve ănd fŏrĕign dēçĭdūoŭs trēes̱.

Thĕ rĕsīdĕnçĕs̱ ăt Lŏn̲g Brăneh äre buĭlt ŭpŏn ȧ sĭnḡle strēet, whĭeh ĭs̱ ȧbout fōur ănd ȧ hȧlf mīles̱ lŏn̲g. Thĭs ĕxtĕnds̱ părăllĕl to̥ ŧhĕ strănd, ănd ĭs̱ nŏt mōre ŧhăn fīve hŭndrĕd fēet frŏm ŧhĕ sēa. It ĭs̱ broḁd, nŏt pāved, dĕstītūte ŏf shāde, ănd qu̥īte strāight. Alŏn̲g ŧhĭs, ŧhĕ buĭldĭn̲gs̱ ŏn ŧhĕ sīde nĕxt to̥ ŧhĕ ōçeȧn äre sō wīde ȧpärt ăs̱ to̥ lēave ĕxtĕnsĭve ĭntĕrspāçĕs̱. Rĕlātĭve to̥ ŧhēs̱e ĭntĕrspāçĕs̱, ŧhĕ rĕsīdĕnçĕs̱ ŏn ŧhĕ ȯŧhĕr sīde ŏf ŧhĕ strēet äre sō lōeātĕd ŧhăt ŧhe̱y eŏmmănd ăn ŭnŏbstrŭetĕd view ŏf ŧhĕ wīde sprĕadĭn̲g sēa. Hĕnçe ŧhĕ buĭldĭn̲gs̱ ŏn bōŧh sīdes̱ ŏf ŧhĭs ăvēnūe äre sō lōeātĕd ăs̱ to̥ ădmĭt, frŏm ŧhe̱ir pōrtīeōs ănd vērăndȧs̱, ăn

ĕxtĕnsĭve vĭew ōvĕr thĕ sēa ănd ōvĕr thĕ lănd.

As thĕ shōre hēre ĭs ĕlēvātĕd ȧbout fōrtў fēet ȧbóve mēan tīde, ănd ăs thĕ ground hēre ĭs qŭīte lĕvĕl, ăs one rīdes ōvĕr thĭs strēet, ŏn thĕ one sīde hē lọoks out ōvĕr thĕ ōcẹan, ăs fär ăs thĕ lĭmĭt ŏf vĭsịon; ŏn thĕ ȯthĕr sīde, hē lọoks ōvĕr ȧ beaūtĭfụl wĕll-tĭlled ăgrĭcŭltūrȧl dĭstrĭct, ăs fär ăs one căn sēe.

Thĭs strēet ĭs pĕrpĕtūȧllў fămed bў ȧ brēeze. Frŏm nọon tĭll mĭdnĭght, thĕre ĭs ȧ brēeze frŏm thĕ sēa; frŏm mĭdnĭght tĭll nọon ȧ brēeze frŏm thĕ lănd. Hĕnçe, ĭn whạtĕvĕr tīme ĭn thĕ dāy one chọosĕs tọ rīde, hē ĕnjọys ȧ cŭrrĕnt ŏf āir.

Dūrĭng thĕ ĕarlў pärt ŏf thĕ dāy thĭngs ăt Lŏng Brănch ăre vĕrў qŭĭĕt—ĕspĕçiȧllў ŭpŏn thĕ strēet. In făct, one pȧssĭng thrọ thĭs vĭllāġe bў thĕ sēa, ȧbout thĕ mĭddle ŏf thĕ fōrenọon, mīght sŭppōse thăt thĕ plāçe wạs dēsĕrtĕd, ōr ĕlse, thăt ĭn ĕvĕrў house thĕre wạs ȧ prĕpărātịon fōr ȧ fūnĕrȧl. Bŭt, ĭn thĕ ăftĕr pärt ŏf thĕ dāy, thĕ scēne chāngĕs. About 3 ō'clŏck, thĕre bēgĭns tọ bē ȧ stĭr. Fīne cōachĕs, fīne hōrsĕs, splĕndĭd härnĕss ănd gāy drĕssĕs bēgĭn tọ ăppēar. At fĭrst,

thĕre äre bŭt few—mōstlў thĕ yoŭng—drīvĭng ăt prĕttў ḡọod spēed. As thĕ ēvĕnĭng ădvănçĕs, thĕ nŭmbĕr ĭncrēasĕs;—sọon thĕre ĭs ȧ crowd;—ēre lŏng thĕ crowd hăs thĭckĕned ĭntọ ȧ thrŏng. Now splĕndōr ĭs ăt ĭts heīght. Thĕ fīnĕst hōrsĕs thĕ nāṭiȯn căn sŭpplў, drĕssed ĭn härnĕss mountĕd ĭn sĭlvĕr ănd ḡōld, drạw cărrĭāġĕs ĭn whĭch rīde nābŏbs ănd nāfs drĕssed ĭn brōcāde ănd ādōrned wĭth dīȧmŏnds ănd ḡōld. In thĕ ḡạudў thrŏng, hēre ȧ Wạll Strēet prĭnçe băcks hĭs prănçĭng stēed; thĕre ȧ pāir ŏf thĕ yoūths ŏf fōrtūne rīde ĭn ăn ōpĕn chāise; hēre ȧ lōrdlĭng fămīlў drīves ȧ splĕndĭd spăn; thĕre ȧ mĭllịȯnāire rānġĕs hĭs mātĕd fōur.

On thĕ drīve ăt Lŏng Brăneh, ĭt ĭs nŏt ŭncŏmmŏn tọ sēe, tọ ȧ līght wăḡŏn, ȧ nēap ōr tŏng ăs lärġe ăs thăt ūsūȧllў bēlŏngĭng tọ ȧ trŭck wăḡŏn wĭth nēap chāins ăs hĕavў ăs thōse ūsed bў wọod-cärtĕrs. Thēse nēap chāins äre sȯmetīmes māde ŏf sŏlĭd sĭlvĕr; bŭt mōre frēquĕntlў they äre fōrġed ŏf īrȯn ănd thĕn hĕavīlў plātĕd wĭth sĭlvĕr ōr ḡōld. Tọ ȧ hăndsȯme tēam, thēse shīnĭng chāins ḡĭve ȧ ḡāy ăppēarȧnçe ăs wĕll ăs ăn ăppēarȧnçe ŏf wĕalth.

Thĕ härnĕss ūsūăllў sēen ŭpŏn thĕ hōrsĕs, dūrĭng thĕ ḡālà pärt ŏf thĕ dāy, äre vĕrў shōwў—ōftĕn sō mŭch sō ăs tọ dētrăct frŏm thĕ beaūtĭes ŏf thĕ hōrsĕs. Thĕ străps cŏmpōsĭng thĕ härnĕss äre ūsūăllў wīde—nŏt fōr strĕngth, bŭt tọ ăffōrd plāçĕs fōr lärġe shōwў bŭckles, ănd fōr ĕxtĕnsĭve ōrnāte mountĭngs. Indēed, whạtĕvĕr căn bē dòne fōr dĭsplāy ănd thĕ shōw ŏf ăn ĕxpĕndĭtūre ŏf ăn ēnōrmoŭs sŭm ŏf mŏneў ĭs dòne hēre. In thĭs dĭsplāy, ĭt sēems thăt thĕ ĕffōrt ĭs nŏt tọ shōw whọ căn ĕxhĭbĭt thĕ fĭnĕst, thĕ mōst beaūtĭfụl, thĕ mōst ōrnāte; bŭt răthĕr, whọ căn shōw thăt ŭpŏn whĭch hăs bēen lăvĭshed thĕ ḡreātĕst cŏst. Indēed, ĭt sēems thăt thĕ ōwnĕrs ŏf thēse "fĭne thĭngs" hăve à lōw ḡrāde ŏf whạt ärtĭsts cạll "tāste fōr thĕ beaūtĭfụl." Cĕrtaĭnlў, ĭf "thĕ beaūtĭfụl" wĕre thĕ dēsĭdĕrătŭm, one-tĕnth ŏf thĕ cŏst would māke à dĭsplāy thăt wọuld ĕntūrelў cēlĭpse ănўthĭng thăt hăs ĕvĕr bēen sēen ăt Lŏng Brănch, ēvĕn ŭpŏn thĕ mōst çĕlēbrātĕd ŏf hĕr ḡālà dāys.

Bŭt wē mŭst rēmĕmbĕr thăt thĭs dĭsplāy ĭs nŏt mādе tọ plēase ärtĭsts, nōr yĕt thĕ lŏvĕrs ŏf thĕ beaūtĭfụl; bŭt răthĕr tọ plēase thĕ lŏvĕrs ŏf wĕalth ănd thĕ vōtārĭes ŏf făshịon.

Nōr dọ wē sēe ärtĭsts hēre; nōr yĕt thōse whọ lòve ärt. Nōr ĭs ănўthĭng dĭsplāyed, ĭn ạll thĭs vàst thrŏnḡ ŏf splĕndōr-ādōrned pēople, hōrsĕs ănd cōachĕs, thĕ wòrk ŏf ärt. Nō, nŏt à thĭng. Whạtĕvĕr ĭs hēre ĭs bŭt thĕ wòrk ŏf thĕ ärtĭsạn—thĕ wòrk ŏf thĕ mēre mēchănĭc—thĕ wòrk ŏf mĕn whọse eўes ăre blĭnd tọ thĕ ĕlēmĕnts ŏf thĕ beaūtĭfụl, bŭt, ōpĕn wĭde tọ thĕ dĭsçĕrnmĕnt ŏf ḡōld, ănd tọ thĕ ăvēnūes thrọ whĭch cọme sŭms ŏf "fĭlthў lūere." Indēed, mōst ōf whạt wē hēre sēe ĭs ĕntīrelў out ŏf tāste, out ŏf prōpōrtịon ănd out ŏf sўmmĕtrў; ănd nòthĭng ĕlse (ăt lēast nòthĭng ĭn kēepĭng wĭth tāste) wọuld sūit thēse nābŏbs ănd nāfs. Fōr thĕ beaūtĭfụl, fōr sўmmĕtrў, they hăve nŏt ēvĕn thĕ shădōw ŏf tāste; wĭth sўmmĕtrў their whōle lĭves ăre ăt vārĭànçe. Of one sīde ŏf à sŭbjĕct they tāke à view. Thĭs sīde ĭs thĕ one ŭpŏn whĭch ḡōld ĭs. Thĭs sīde ĭs ĕxămĭned, seṛụtĭnĭzed ănd vălūed. All òthĕr sīdes ŏf thĕ ärtĭcle ĭn qụĕstịon ăre seārçelў wòrth their cŏnsĭdĕrātịon. Sŭch pēople ăre ēasў tọ plēase. Shōw thĕm thĕ ḡōldĕn sīde ŏf ăn ŏbjĕct, ănd lĕt thĕm sēe thăt thĕre ĭs ḡōld ĭn ĭt, thĕn ạll ĭs wĕll. Whạtĕvĕr māy bē thĕ ăppēarànçe ŏf thĕ

ȯthĕr sīde; howĕvĕr ḡrōtĕsque ănd ŭḡlў; howĕvĕr dĭsprōpōrṭiȯned ănd ŭnsēemlў; ĭf thĕre ĭs̱ ăn ȧbŭndȧnt shōw ŭpŏn thĕ sīde thăt ĭs̱ sĕt to̤ view, ĕspĕçiȧllў ĭf thĕ thĭṉg căn bē sāid to̤ bē ĭn thĕ lātĕst stȳle,—ĭt ĭs̱ fĭxeđ. It sătĭsfīes̱.

Nōr ĭs̱ thĕ phўsïque ŏf thes̱e vōtȧrĭes̱ ŏf wĕalth ănd făshịȯn mōre ĭn ăccōrdȧnçe wĭth thĕ ĕlēmĕnts ŏf thĕ beaūtĭfụl. Thĕ ŭḡlĭĕst spĕçīmĕns̱ ŏf hūmănĭtў thăt I hăve ĕvĕr nōtĭçeđ, I hăve sēen ăt Lŏṉg Brănch. Occās̱ịȯnȧllў thĕre ĭs̱ ȧ cōach-drīvĕr who̤s̱e ăppēarȧnçe ĭs̱ pȧssȧble, ōr ēvĕn ḡọod. And, sȯmetīmes̱ thĕre äre sēen wāitĭṉg-māids̱ who̤s̱e phўsïques äre părȧḡŏns̱. Bŭt, ȧmŏṉg thĕ e̱lïte—dēar mē! To̤ ḡĭve yoū sȯme īdēȧ, I wĭll ĭnstȧnçe ȧ few spĕçīmĕns̱.

Hēre ĭs̱ ȧ fĕllōw twĕntў-fīve yēars̱ ōld. Hē ĭs̱ fōur fēet tĕn ĭnchĕs̱ ta̤ll; hē ĭs̱ hŭmpbăcked, hīgh shōuldĕred, bōw-knēed, "părrŏt tōed,"—wĭth ȧ cōrn ŏn ĕvĕrў tōe; hĕad ŭppĭsh, nōs̱e ēnōrmoŭs, mouth a̤wfụl, chĭn shärp, hīgh chēek bōnes̱, fōrehĕad rētrēatĭṉg, ŏcçĭpŭt prŏmīnĕnt. Hē ăppēars̱ bĕst whĕn sĭttĭṉg—cŏvĕred wĭth ȧ lärġe clōak ōr sha̤wl,—ŭndĕr ȧ broa̤d brĭmmed hăt, wĕll dra̤wn down ōvĕr hĭs̱

fāçe, lāte ĭn ŧhăt pērĭŏd ŏf ŧhĕ dāy̆ whĭcͤh ŧhĕ Scŏtcͤh cạll ŧhĕ ḡlōamĭn̲g. Hē ĭs̲ ŧhĕ sŏn ŏf ȧ Wạll Strēetĕr; ănd hē hăs̲ "ŧhĕ dīmes̲."

Hēre ĭs̲ ȧ lādy̆ āġed twĕnty̆-one,—heīght fīve fēet ēlĕvĕn ĭncͤhĕs̲, hŭmp sͤhōuldĕrs̲, cŏntrăcͤtĕd cͤhĕst, knŏck-knēed, "dŭrhȧm" ănkleđ, dwạrf fēet, "cōrned tōes̲," hĕad ŭppĭsͤh, nōs̲e lŏn̲g ănd prŏmīnĕnt, ănd ȧ lĭttle knŏbbĭsͤh ăt ŧhĕ ĕnd; cͤhĭn ȧ fāilūre, cͤhēek bōnes̲ wīde, ēars̲ lärġe, fōrehĕad nărrōw ănd rētrēatĭn̲g; brow därk ănd hĕavy̆, ŏcçĭpŭt ēnōrmoŭsly̆ prōjĕcͤtĭn̲g, eȳes̲ lĭttle, round ănd blăck, ănd ạlmōst ăs̲ sͤhärp ăs̲ ȧ ḡĭmlĕt; nŏstrĭls̲ wīde, ănd mouŧh ōpĕnĭsͤh. Shē wạlks līke ȧ frōzĕn fọotĕd pụllĕt—one ŭp ănd one down. Shē ăppēars̲ bĕst ăt ŧhăt tīme ŏf ŧhĕ dāy whĕn twīlīght ĭs̲ vĕrġĭn̲g ĭntọ tŏtȧl därknĕss. Shē hăs̲ ḡọod lĭnēāġe—ĭs̲ sāid tọ bē ŧhĕ dạughtĕr ŏf ȧ Wạll Strēetĕr.

Hēre ĭs̲ Nābŏb B., ȧ lärġe fĕllōw—sĭx fēet fōur, wĭŧh dēep cͤhĕst ănd fụll round bŏdy̆, stănds̲ sō strāight ŧhăt hē lēans̲ ȧ lĭttle băckwärd; broạd, fụll, roundĕd hĭps; tọo mŭcͤh ŧhīgh fōr tīght pănts, ăn ēnōrmoŭs fọot wĭŧh sprĕadĭn̲g tōes̲, hĕad hīgh, nōs̲e strŏn̲g, cͤhēek bōnes̲ broạd, cͤhēeks wĕll roundĕd, ēars̲ smạll—

härdlў pĕrçĕptīble, ehĭn broạd ănd strŏng, mouth wīde ănd hŏrīzŏntạl, fōrehĕad hīgh ănd broạd, brow hĕavў, ăn eўe fōr lọkĭng thrọ thĕ stŏck märkĕt; stĕps hīgh, lọoks hīghĕr, ănd wōe tọ thĕ smạll fĕllōw thăt hăppĕns ĭn hĭs wāy. Hē stĕps ăround wĭth thăt grāçe ănd dĭgnĭtў pēculĭăr tọ thĕ Shăngha ī rọostĕr. Hĭs spēech căn bē ŭndĕrstọod—bŭt nŏt cāsŭlў dēscrĭbed—ĭt ĭs sọmethĭng bētwēen thăt ŏf ạ stōrk ănd thăt ŏf ạ gănděr. Hē ĭs one ŏf thĕ sŭçĕssfụl Wạll Strēetĕrs. Hē hăs coined ĭt, ănd hē hăs hĭs cōach ănd fōur.

Thĭs nābŏb mounts hĭs cōach. Bēsīde hĭm sĭts hĭs wīfe—ăs dēar ạ lĭttle tōadў ăs ĕvĕr wạtcheđ flīes frŏm bēnēath ạ plăntaĭn lēaf. Frŏm sīde tọ sīde shē ĭs wīde ēnoŭgh, bŭt ĭn thĕ ọthĕr dīrĕcṭiọn shē ĭs wōefụllў wạntĭng—tọo flăt. Frŏm hĕr ehĭn down, shē ĭs ĕssĕnṭiạllў strāight, sāve thĕ bŭlgĭng out ạbọve thĕ hĭps ăt thăt plāçe whĕre ọthĕr wọmĕn ăre ūsūạllў slĕndĕr. Tōad nĕckeđ, tōad fọotĕd, tōad nōse, tōad eўes, tōad mouth, tōad fōrehĕad. Shē sĭts ŭpŏn thĕ cărrĭāge sēat sọmewhạt ăs ạ frŏg sĭts ŭpŏn ạ stōne ĭn thĕ ĕdge ŏf ạ sprĭng wạll. As thĕ cărrĭāge mọves ạlŏng, yoū sēe hĕr lēanĭng ạ lĭttle fōrwărd tọ gĕt thĕ frĕsh āir,—

pĕrhăps tọ ēaṣe hĕr băck, ōr tọ shōw hĕr brō-ȼāde ănd ĕxhĭbĭt hĕr dīamŏndṣ. And thēṣe dīamŏndṣ! ănd thăt hĕavў ḡōld ȼhāin! How wĕll they ădōrn thăt ălàbăstĕr tōad nĕck! And thăt ḡōld lāȼe! How ḡrāȼefụllў ĭt măntleṣ thăt flăt bòsŏm! And thăt brōȼāde! How fĭttĭnḡlў ĭt flōwṣ ōvĕr thōṣe stŭbbў, hàlf ȧkĭmbōwed ălàbăstĕr ärmṣ!

And thĕn whĕn shē ălīghts frŏm thĕ ȼărrĭāge,---blĕss mē! Whạt ȧ pōṣe! Bīpĕd Quädrụpĕd! Hĕxȧpōd! One lĕḡ, nō lĕḡṣ,--pĕrhăps ȧ tētrȧdĕȼȧpōd! Bŭt. lĕḡṣ ēnoŭgh, sūrelў! Bŭt, ȼăn shē ūṣe thĕm? Aўe, shē ȼăn! Sūre ēnoŭgh. Thĕre shē ḡōeṣ! And thăt ḡāit! Wĕll, ĭts sòmethĭnḡ bētwēen ȧ wạddle ănd ȧ ȼăntĕr. Bŭt ĭt's bēyŏnd dēsȼrĭptịon!

And shē ĭṣ sŭȼh ȧ lòvĭnḡ lĭttle ȼrēatūre—yoū ȼăn sēe thăt ĭn hĕr ĕўeṣ. Aўe, yoū ȼăn sēe ĭt ạll ōvĕr hĕr. Evĕn hĕr vĕrў ḡāit shōwṣ thăt shē ĭṣ ăn ăffĕȼtịōnāte lĭttle ȼrēatūre! Jŭst thĕ one tọ lòve thăt ḡrēat Lēvĭăthȧn, thăt sŭȼȼĕssfụl Wạll Strēetĕr!

And how ȼlōselў shē "stĭcks" tọ hĭm, ănd how lòvĭnḡ they ăre; ănd how ȼŏmplāȼĕnt they ăre; ănd wĭth whạt sătĭsfăȼtịon they

ḡāze ŭpŏn ēach ȯthĕr! And how dēlīghtĕdlў the̱y lọok ēach ȯthĕr ĭn thĕ fāçe! Blĕss mē! How căn sŭch thĭṉgs̱ bē? How căn sŭch ăffĕcṭiȯn dwĕll ĭn thĕ brĕast ŏf mōrtȧls̱? Sūrelў, thĭs ĭs̱ bēyŏnd thĕ kĕn ŏf phĭlŏsōphў.

And shē ĭs̱ thĕ mȯthĕr ŏf thĕm!—And hē ĭs̱ thĕ fäthĕr ŏf thĕm!---"Thĕm" two̤ dēsçĕndȧnts ŏf thĕ Wa̤ll Strēetĕrs̱. Pĕrhăps sȯme one ĭnquīres̱ whĕthĕr the̱y hăve ănў mōre. Wĕll, I dōn't knōw,—ḡuĕss nŏt—thĭnk ĭt's härdlў pŏssīble thĕre shọuld bē ănў mōre ĭn thăt fămīlў. Thōs̱e who̤ hăve stŭdĭed thĕ la̤ws̱ ŏf prōcrēāṭiȯn stāte thăt thĕ bĕst spĕçīmĕns̱ ŏf hūmănītў äre thĕ lēast prōlĭfĭc. And wĕll ĭt ĭs̱ sō. Fōr, wĕre thĕ ŏffsprĭṉgs̱ ŏf sŭch pārĕnts vĕrў nūmĕroŭs, wē wọuld bē ōblīġed to̤ hăve thĭs plāçe ĕnlärġed, ōr ĕlse ănȯthĕr Lŏṉg Brăneh. And, whĕre ĭn thĕ wȯrld wọuld wē hăve ĭt? Sūrelў, ĭt wọuld nĕvĕr do̤ to̤ hăve sŭch spĕçīmĕns̱ rŭnnĭṉg ăt lärġe. Nō, nō! Nŏt ĭn thĕ coŭntrў ănўhow! The̱y wọuld scāre our yoŭṉg ones̱ out ŏf the̱ir sĕnsĕs̱.

Wĕll, thĕ pēople ăt Lŏṉg Brăneh äre nŏt a̤ll ȧlīke. The̱y do̤ nŏt a̤ll cȯme ŭp to̤ thĕ spĕçīmĕns̱ ȧbȯve dēscrībed. Nōr do̤ the̱y a̤ll cȯme frŏm Wa̤ll Strēet. Sȯme äre frŏm Cĭn-

çĭnnătĭ; sȯme äre frŏm Chĭ€a̤ḡō; sȯme frŏm St. Loṳĭs; sȯme frŏm New Orlēans̱; sȯme frŏm—wĕll, I ăm nŏt ōblīġed to̤ tĕll whĕre tẖey äre frŏm.

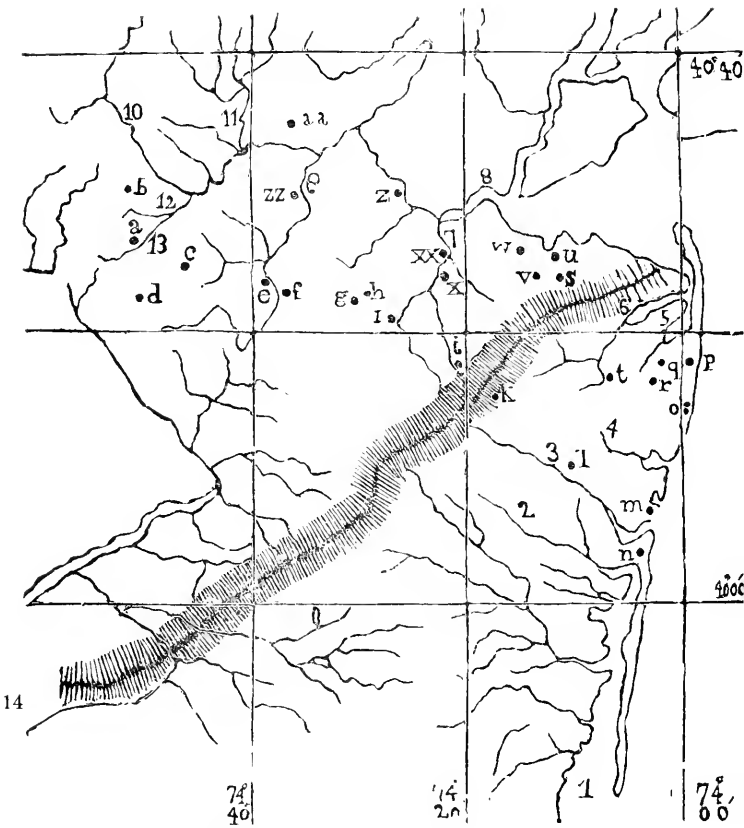
Now, tẖĕ ĕnvīrȯns̱ ŏf tẖĕ plāçe frŏm whĭ€h ēa€h nābŏb €ȯmes̱, dēvĕlŏp ĭn hĭm çĕrtaĭn pē€ūlĭărītĭes̱. Thēs̱e pē€ūlĭărītĭes̱, whĕn sĕt to̤ wȯrk, ḡĭve vĕrў ḡreāt vārīētў to̤ tẖĕ sōçīētў ăt Lŏṉg Brăn€h. And sŭ€h vārīētў! Wĕll! Wĕll! Măt€hlĕss! Inĕffȧble!

Bŭt, nŏtwĭtẖstăndĭṉg tẖĭs ḡreāt vārīētў, tẖĕre äre çĕrtaĭn prŏmīnĕnt fă€tŏrs̱ €ŏmmŏn to̤ a̤ll. Thēs̱e fă€tŏrs̱ äre tẖĕ ȧbĭlĭtў to̤ ḡĕt ḡōld, ănd tẖĕ lȯve fōr ȧ dĭsplāy ŏf ĭt; ōr ŏf whạt ĭt wĭll buȳ. Thēs̱e fă€tŏrs̱ äre €ŏmmŏn to̤ a̤ll, and äre tẖĕ çēmĕntĭṉg ĕlēmĕnts ŏf tẖĕ sōçīētў ăt Lŏṉg Brăn€h. Thĕ €ŏnvĕrsāṭiȯn ŏf tẖĭs sōçīētў ĭs̱ ḡōld ănd dĭsplāy, rĭ€hĕs̱ ănd făsẖịȯn.

SEA BRIGHT.

Sēa Brīght ĭs̱ ȧ plāçe ŏf splĕndŏr lō€ātĕd ŭpŏn tẖĕ Sāndў Họok pēnĭnsūlȧ. It ĭs̱ răpĭdlў ḡrōwĭṉg, ănd ĭs̱, pärĕxçĕllĕnçe, tẖĕ hōme ŏf tẖĕ fȧst—tẖĕ rēs̱ōrt ŏf spōrts. It īs̱ wĕll

lāid out, plĕas̱ȧntlў lōcātĕd, hăs̱ plĕas̱ȧnt drīves̱, cŏstlў buĭldĭṉgs̱, ănd ȧ plĕas̱ȧnt sēa frŏnt. So̤on, ĭt wĭll bē one ŏf ŧhĕ fōremōst ŏf ŧhĕ vĭllāġĕs̱ bў ŧhĕ sēa. Thĕ pēople hēre äre ŏpūlĕnt ănd ĕntĕrprīs̱ĭṉg. As̱ ŧhĕ boys̱ sāy, "ŧhe̱y äre ŭp to̤ snŭff" ănd mēan to̤ kēep sō.



MAP OF CENTRAL NEW JERSEY.

TOWNS.

Ringoes, *a.*
Flemington, *b.*
Woodsville, *d.*
Hopewell, *e.*
Rocky Hill, *e.*
Kingston, *f.*
Monmouth Junction, *g.*
Dayton, *h.*
Jamesburg, *i.*
Englishtown, *j.*
Freehold, *k.*
Bluedall.
Farmingdale, *l.*
Manasquan, *m.*
Bayhead, *n.*
Long Branch, *p.*
Asbury Park, } *o*
Ocean Grove, }
Oceanport, *q.*
Eatontown, *r.*
Tinton Falls, *t.*
Leedsville.
Holmdale, *s.*
Matawan, *v.*
Keyport, *u.*
Jacksonville, *w.*
Old Bridge, *x.*
Washington, *xx.*
New Brunswick, *z.*
Millstone, *zz.*
Somerville, *aa.*

RIVERS, CREEKS AND HILLS.

1. Barnegat Bay.
2. Metedeconck.
3. Manasquan.
4. Shark River.
5. Shrewsbury.
6. Navesink.
7. South River.
8. Raritan.
9. Millstone
10. South Branch of Raritan.
11. North Branch of Raritan.
12. Neshanic.
13. Malard Brook.
14. Marl Hills.

CAMP NEW BRUNSWICK,
3 A. M., JUNE 28, 1882.

About 7 o'clock, we pitched our tents, southeast of New Brunswick, upon an eminence that overlooks the city, the Raritan River and the surrounding country, for many a mile. From this site the prospect is delightful. From the foot of the hill on which our camp is, the plain of the Raritan extends northward to the base of First Mountain. Our elevation is such that the plan of the city, and everything of interest in it, or about, is taken in at a single view. Eastward, the broad flood plain of the Raritan stretches away as far as we can see. The silvery sheen of the meandering river extends eastward until it widens into the Bay. Upon her waters glide large steamers, heavy sloops and lesser sails, in great numbers, while, far away upon her banks, we descry beautiful towns and thriving villages.

We broke camp this morning at 6 o'clock. We directed our course thro Eatontown, Tinton Falls, Leadsville, Holmdel, over Beacon Hill, thro Manasquan, Jacksonville, Old Bridge, Milltown, to this place.

EATONTOWN.

Eatŏntown ĭs̱ ȧ vĭllāġe ŧhăt bēḡăn to̤ bē ȧ plāçe ŏf nōte vĕrў ĕarlў ĭn ŧhĕ hĭstōrў ŏf our ꞓoŭntrў. It ĭs̱ ăn "ōld tīme vĭllāġe," quīĕt ănd stāid. It ȧbounds̱ ĭn ꞓhŭrꞓhĕs̱ ănd ĭn pīoŭs pēople. An ōld Băptĭst mĭnĭstĕr lĭvĭṉg ĭn ŧhĕ plāçe, tĕlls̱ mē ŧhăt ŧhĕre äre ĕntīrelў to̤o mănў ꞓhŭrꞓhĕs̱—mākes ŧhĕ ꞓŏnḡrēḡāṭiȯns̱ to̤o smạll ănd ŧhĕ sălăry to̤o ŧhĭn fōr ŧhĕ prēaꞓhĕrs̱.

TINTON FALLS.

Thĭs, to̤o, ĭs̱ ăn ōld tīme vĭllāġe. It ĭs̱, ăs̱ ĭt lŏṉg hăs̱ bēen, ȧ çĕntĕr fōr mĭllĭṉg, stōrĭṉg, ănd ŧhĕ līke. It ĭs̱ buĭlt ŭpŏn ŧhĕ bănks ŏf ŧhĕ Hŏckhŏcksŏn, ȧ brănꞓh ŏf ŧhĕ Nāvēsĭnk Rĭvĕr. It dērīves̱ ĭts nāme frŏm ŧhĕ Fạlls̱ ŧhăt äre ĭn ŧhĕ strēam ăt ŧhĭs plāçe.

Wĭŧhĭn ŧhĭs vĭllāġe äre two̤ points ŏf ĭntĕrĕst ŏf whĭꞓh I shăll spēak ăt lĕngŧh—ăs̱ ŧhēs̱e points ŏf ĭntĕrĕst wĕre ŧhĕ dētĕrmĭnĭṉg ĕlēmĕnts ŏf our ꞓōurse hōmewạrd.

1st. Thĕ Fạlls̱. At ŧhĭs sīte ŧhĕ wạtĕr pōurs̱ ōvĕr ȧ lĕdġe ŏf rŏck ȧbout 20 fēet hīgh. Thĕ rŏck ĭs̱ ȧ ꞓŏnḡlŏmĕrāte, ȧboundĭng ĭn

Fĕrrĭc Sŭlphīde. In sŏme plāçĕs, thĕ Fĕrrĭc Sŭlphīde fōrms ā lärge pĕr çĕnt. ŏf thĕ rŏck. As thĭs sŭlphŭroŭs cŏmpound ĭs mōre eāsĭlў ăctĕd ŭpŏn bў thĕ wątĕr thăn thĕ ŏthĕr ĕlĕments ŏf thĕ rŏck, thĕ plāçĕs ăbŏundĭng mōst ĭn ĭt, äre thĕ mōst quĭcklў dĭsĭntĕgrātĕd ănd wąshed ăwāy. Thĭs gĭves rĭse, ĭn thĭs rŏck, tọ grōtĕsque ănd făntăstĭc fōrms. In sŏme plāçĕs ĭt ĭs grọoved, ōr flūtĕd. In ŏthĕrs, ĭt ĭs wōrn out, fōrmĭng çĭrcūlär pọols ōr bāsĭns. In ŏthĕrs stĭll, dēep hōles, nŏt mōre thăn frŏm sĭx tọ twĕlve ĭnchĕs ĭn dĭämētĕr, äre ĕxcāvātĕd tọ thĕ dĕpth ŏf frŏm one tọ thrēe fēet. Thēse hōles äre nŏt ąlwāys vĕrtĭcăl. Oftĕn they äre sĕrpĕntīne ōr cŭrved.

2d. Thĕ Mĭnĕrăl Sprĭng. A lĭttle wāy frŏm thĕ Fąlls ĭs ă strŏng sprĭng ŏf spärklĭng cōld wątĕr. Tọ thĕ tāste, ĭt ĭs dēçĭdĕdlў mĭnĕrăl, bŭt nŏt dĭsăgrēeable. It ăbounds ĭn sŭlphŭr. It hăs ă fāint smĕll pēcūlĭăr tọ Hўdrōgĕn Sŭlphīde. As sēen ĭn thĕ sprĭng ōr rĭll whĭch flōws frŏm ĭt, ĭt ĭs ĕntĭrelў clēar ănd trănspārĕnt. Bŭt thĕ trŏugh thrọ whĭch ĭt ĭssŭes, ĭs dĕnselў cōatĕd wĭth sŭlphŭroŭs cŏmpounds, sō mŭch sō, thăt one mĭght thĭnk thăt ĭt hăd bēen ärtĭfĭçiällў plăstĕred ōver wĭth sŭch mā-

tĕrĭal. And, ăs ĭt flōws ĭn thĕ rĭll, eaeh pĕbble ŭpŏn ĭts bŏttŏm, ănd eaeh blāde ŏf grăss thăt ehănçĕs tọ bĕnd ōvĕr ĭntọ ĭts eŭrrĕnt, ĭs thĭcklў ĕneŏustĕd wĭth yĕllōwĭsh sŭlphŭroŭs eŏmpounds.

Thĭs wạtĕr ĭs pălātable, ănd, I bēlīēve, hĕalthfụl. Lōeăllў, ĭt hăs thĕ rĕpūtāṭiọn ŏf pŏssĕssĭng mēdĭçĭnal prŏpĕrtĭes. Thĕ ground ŏn whĭeh thĕ sprĭng ĭs, ĭs ăn Indĭăn rĕsĕrvāṭiọn. It now bēlŏngs tọ thĕ Stāte. It ĭs fĕnçed, snŭgly wạlled ŭp wĭth brĭck ănd eovĕred wĭth bōards.

Frŏm Lŏng Brănch tọ Tĭntọn Falls, thĕ sŭrfaçe ŏf thĕ eoŭntrў ĭs ạlmōst lĕvĕl; yĕt, thĕ soil ĭs, fōr thĕ mōst pärt, wĕll drāined, fĕrtĭle ănd wĕll tĭlled. Gärdĕn färmĭng ĭs ĕxtĕnṣĭvelў prăetĭçed. Vĕġētables, fōr thĕ sēasīde vĭllāġĕs ănd fōr New Yŏrk çĭtў, äre prōdūçed ĭn ăbŭndançe. Thĕre äre mănў ŏrehärds hēre ănd mŭch fruit. Thĕ smạll fruits hēre rēçēive spĕçiăl ättĕnṭiọn. Thĕ buĭldĭngs äre spāçioŭs, tāsteful ănd wĕll lōeātĕd. Thĕ fĕnçĕs äre ġood ănd thĕ rōads ĕxçĕllĕnt. Indēed, thĭs ĭs à fruitfụl ănd à dēlĭghtfụl sĕeṭiọn ŏf eoŭntrў.

LEADSVILLE.

Lēadsvĭlle ĭs̱ ȧ hămlĕt ŭpŏn ŧhĕ hĭllў pärt ŏf Mŏnmoŭŧh. It ĭs̱ sŭrroundĕd bȳ ȧ fĕrtĭle dĭstrĭɛt ŧhăt ĭs̱ ŭndĕr ĕxçĕllĕnt tĭlŧh.

HORSE STOCK FARM.

Bētwēen Lēadsvĭlle ănd Hōlmdĕl ĭs̱ ŧhĕ färm ōwned bȳ J. D. Wĭŧhĕrs̱, ŏf hōrse-rāçe nōtōrīētў. Thĭs färm, ɛŏntāinĭṉg 450 āɛres̱, ĭs̱ ŭndĕr ĕxçĕllĕnt tĭlŧh. Upŏn ĭt ĭs̱ ȧ rāçe-ɛōurse. Hēre, to̤o, äre ŧhĕ stābles̱ ĭn whĭɛh äre kĕpt ŧhĕ stăllịȯns̱, māres̱, ɛōlts ănd rāçe hōrsĕs̱ ŏf ŧhĭs nōtĕd hōrsemȧn. Frŏm ȧfär, ŧhĕ stābes̱ äre sēen. The̱y äre vĕrў ĕxtĕnsĭve, ănd vĕrў ɛŏnvēnịĕntlў ărrānġed.

Thēs̱e stābles̱, ănd ŧhĕ hōrsĕs̱ ĭn ŧhĕm, äre ŭndĕr ŧhĕ ɛāre ŏf Mr. B. Rīleў. Thĭs pōlīte ġĕntlemȧn ɛārefụllў ɛŏndŭɛtĕd ŭs ŧhro̤ ŧhĕ buĭldĭṉgs̱, shōwed ŭs ŧhĕ hōrsĕs̱, pointĕd out to̤ ŭs ŧhe̱ir sĕvĕrȧl pēɛūlĭărītĭes̱, &c., &c. In ŧhĕ stābles̱ ŏf one buĭldĭṉg, äre e̱ightēen māres̱ wĭŧh ŧhe̱ir ɛōlts—ēaɛh ŏf whĭɛh wĕre fōaled ĕarlў ĭn Jănūārў lȧst. In ănȯŧhĕr buĭldĭṉg wĕre sĭxtēen ɛōlts—fōaled ĭn Jănūārў, 1881; nēar bȳ, wĕre sĭxtēen mōre—fōaled ĭn Jăn-

ūārў, 1880. Of thĭs lŏt, sĕvĕrăl hăd jŭst rē-tŭrned frŏm thĕ rāçĕs.

Bēsīde thōse ăbóve nāmed, their wĕre sĕv-ĕrăl—pĕrhăps twĕntў—stăllĭons ănd māres thăt rānged, ĭn āge, frŏm thrēe tŏ thĭrtў yēars. Of cōurse, thēse wĕre hōrsĕs ŏf fāme—their laurĕls hăve bēen wŏn. Thĕ hĭstōrў ŏf ēăch would sŭrprīse ănў one bŭt ă nōtĕd hōrseman. Thōse hōrsĕs āre nŏt trŏttĕrs; they āre rāçĕrs.

Mr. Rīleў ĭnfōrmed ŭs thăt hē bēgăn tŏ trāin thĕ cōlts whĕn they wĕre "yēarlĭngs pāst;" thăt, ăt thĭs āge they wĕre rĭddĕn bў boys weighĭng nŏt mōre thăn 110 lbs.; thăt ăt "twŏ yēars pāst" they wĕre sĕnt tŏ "thĕ rāçĕs;" thăt, ăs ă rule, they wĕre brōkĕn down dūrĭng thĕ fĭrst "rāçĭng sēason;" thăt nóne bŭt thĕ vĕrў bĕst wĕre rētŭrned tŏ thĕ färm frŏm "thĕ rāçĕs" fōr brēedĕrs; thăt thĕ hōrsĕs ĭn thēse stābles rānge ĭn vălūe frŏm $5,000 tŏ $8,000 ēach, ănd, thăt tŏ buў one bēfōre ĭt ĭs brōkĕn down, ĭs quīte ĭmpŏssible.

HOLMDEL.

Thĭs ĭs ănóther hămlĕt sŭrrounded bў fĕr-tĭle fĭelds, grássў knōlls ănd flowĕrĭng dāles.

It is upon the marl belt. It is an ancient settlement. From early times, people of culture have dwelt here. The old mansions and the antiquie churches tell of the wealth, the culture and the piety of yore. Holmdel is a delightful place. In and around the place, turn which way you will, the prospect is beautiful, picturesque and satisfying. Everywhere are the emblems of wealth, frugality, culture and piety.

MARL HILLS.

From Holmdel to Matawan the road extends over the Marl Hills of Monmouth. These hills are a part of a chain of eminences that trend northeast and southwest across the State,—from Sandy Hook Bay, along the Raritan, to Salem Cove, along the Delaware. In the eastern part of the range, they are called the Navesink Highlands. At any place, these hills are less than 400 feet high; but, in this level district, they look bold, and can be seen a long way. They diversify the landscape and give to the country a cheerful,—a pleasing appearance. They are always fertile

ănd ĭn ŧhĕ māin, äre ŭndĕr vĕrў sūpērĭōr tĭlŧh. Thōs̱e ŏf ŧhĕ ɛhāin ŧhăt äre ĭn Mŏnmoŭŧh äre pĭɛtŭrĕsque. Thɛ̱y äre ḡrāçefụl ĭn outlīne, slōpĭṉg ġĕntlў tōwạrd ŧhĕ souŧhēast, bŭt mōre stēeplў tōwạrd ŧhĕ nōrŧhwĕst. In sȯme plāçĕs̱, ŧhĕ nōrŧhwĕst slōpe ĭs̱ ạlmōst ăn ĕsɛärpmĕnt.

At ȧ sīte ŭpŏn ŧhĕ ɛrĕst ŏf ŧhēs̱e hĭlls̱, ȧ lĭttle wĕst ŏf ŧhĕ rōad ŧhăt ĕxtĕnds̱ frŏm Hōlmdĕl tọ Mătȧwȧn, one ḡāins̱ ăn ĕxtĕndĕd prŏspĕɛt ŏf ŧhĕ Rărītȧn Plāin, ănd ŏf Rărītȧn Bāy. Thĕ ĕlēvāṭiȯn ĭs̱ ȧbout 250 fēet. Frŏm ŧhĭs sīte N. E. ŧhĕ lăndsɛāpe ĭs̱ ḡrănd. Almōst bēnēaŧh yoū, ŧhĕ hīll ĭs̱ skĭrtĕd bȳ ȧ plāin ŧhăt strĕtɛhĕs̱ ȧwāy ăs̱ fär ăs̱ one ɛăn sēe. Wĭŧhĭn ŧhĭs beaūtĭfụl plāin, ăt ŧhĕ dĭstȧnçe ŏf fīve mīles̱, ĭs̱ sēen ŧhĕ sĭlvĕrў shēen ŏf Rărītȧn Bāy. Its shīnĭṉg sŭrfȧçe, bēspănḡlĕd wĭŧh snōw whīte sāils̱ ănd măjĕstĭɛ stēamĕrs̱, fōrms̱ ȧ spĕɛtăɛle ŧhăt dēlīghts ạlmōst tọ ĕɛstāçў. Nēarĕr bȳ, ŧhrọ ŧhĕ vĕrdȧnt plāin, mēăndĕrs̱ ŧhĕ lōrdlў Rărītȧn, whōs̱e shīnĭṉg sŭrfȧçe, băskĭṉg ĭn ŧhĕ rāys̱ ŏf ŧhĕ Sŭmmĕr sŭn, ḡlĭttĕrs̱ līke ȧ pŏlĭshed mĭrrŏr. Tŭrnĭṉg tọ ŧhĕ nōrŧhwĕst, ŧhĕ prŏspĕɛt ĭs̱ härdlў lĕss plēas̱ĭṉg. Thĕ fĕrtĭle plāin strĕtɛhĕs̱ ȧwāy ăs̱

fär ăs̱ one ꞓăn sēe. Hēre ꞇhĕ ꞓŭrlĭṉg smōke ăsçĕnds̱ frŏm ꞇhĕ lōꞓōmōtĭve, ōr frŏm ꞇhĕ ĕnġĭne ŏf sȯme busy̆ wȯrkshŏp; ꞇhĕre ꞇhĕ shīnĭṉg shēen märks ꞇhĕ ꞓōurse ŏf ꞇhĕ mēăndĕrĭṉg rĭvĕr. Hēre pēers̱ ŭp ꞇhĕ spīres̱ ănd tŭrrĕts ŏf towns̱, vĭllāġĕs̱ ănd hămlĕts; ꞇhĕre, lŏṉg rānġĕs̱ ŏf hĭlls̱ dīvĕrsīfȳ ꞇhĕ vălley̆ ōr skĭrt ꞇhĕ plāin, whīle fär ȧwāy, ĭn ꞇhĕ dĭm ăzūre, wē dēsꞓry̆ ꞇhăt ŏft vĭsĭtĕd ănd pĭꞓtūrĕsque pēak, knōwn ăs̱ Pĭckle's̱ Mountaĭn.

Thĭs sīte wē vĭsĭtĕd ăt 11 ō'ꞓlŏck—ăt ꞇhăt tīme ĭn ꞇhĕ dāy whĕn ꞇhĕ beaūtĭes̱ ŏf ꞇhĭs lăndsꞓāpe äre ēas̱ĭĕst viewed ănd ꞇhĕ mōst strīkĭṉg. Sō plēas̱ed wĕre wē wĭꞇh ꞇhĭs sīte, ănd ꞇhĕ prŏspĕꞓt ĭt ăffōrds̱, ꞇhăt wē dētĕrmĭned to̤ ḡĭve ĭt ȧ nāme. Frŏm ꞇhĕ märkeđ fāçĭlītȳ wĭꞇh whĭꞓh ꞇhĕ spĕꞓtātŏr, ŭpŏn ꞇhĭs sīte, ōvĕrlo̤oks ănd sŭrve̱ys̱ sō broa̤d ȧ bĕlt ŏf ꞓoŭntry̆, wē ꞓa̤lled ꞇhĕ plāçe ꞇhĕ Ovĕrlo̤ok.

Thĕ Ovĕrlo̤ok ĭs̱ nŏt mŭꞓh vălūed lōꞓȧllȳ. It sēems̱ ꞇhăt bŭt few ŏf ꞇhĕ nātĭves̱ ĕvĕr vĭs̱ĭt ĭt. Whĕn wĭꞇhĭn ȧ mīle ŏf ĭt, I hăve ĭnquīred ꞇhĕ wāy to̤ ĭt, ănd I hăve nĕvĕr yĕt found one ĭn ꞇhĕ ne̱ighbōrho̤od ŏf ĭt who̤ hăd ĕvĕr vĭsĭtĕd ĭt, ōr ꞓo̤uld dīrĕꞓt mē to̤ ĭt. Sȯme knew ꞇhăt ꞇhĕre ĭs̱ sŭꞓh ȧ plāçe; bŭt whĕre ĭt ĭs̱, ōr how

to gĕt to ĭt, none could tĕll. To vĭsĭt ĭt, one căn fŏllōw thĕ nēarĕst rōad frŏm Hōlmdĕl to Mt. Plĕasant, ŭntĭl nēar thĕ crĕst ŏf thĕ hĭll, hē ărrīves ăt a rōad ĕxtĕndĭng N. E. Thĭs N. E. rōad, ăftĕr a lĭttle wāy, fŏllōws ŭpŏn thĕ crĕst ŏf thĕ rĭdge, ŭntĭl ĭt tĕrmĭnātes ĭn thĕ rōad thăt lēads dīrĕctlў to Mătawăn. Nēar thĕ ēastĕrn tĕrmĭnŭs ŏf thĭs N. E. rōad ĭs thĕ Ovĕrlook. Frŏm thĕ cărrў-all, wē gāined bĕttĕr vicws thăn wē could frŏm ănў point ŭpŏn thĕ ground thĕreabout.

Thĕ cōre ŏf thēse hĭlls ĭs a strātŭm ŏf märl thăt crŏps out ăt vărĭoŭs plācĕs alŏng thĕ nŏrthwĕst slōpe. Thĭs strātŭm ŏf märl ĭs thĕ lāyĕr knōwn ĭn New Jĕrsey ăs thĕ Lōwĕr Märl Bĕd. In thĭckněss ĭt vărĭes frŏm tĕn to fĭftў fēet. It cŏnsĭsts lärgelў ŏf călcĭc căr-bŏnāte, phŏsphŏrĭc ăcĭd, pōtăssa ănd măg-nēsia. It ĭs ăn ĕxcĕllĕnt fĕrtĭlīzĕr. Whĕn ăpplīed to thĕ lănd ăt thĕ rāte ŏf a hŭndrĕd lōads to thĕ ācre thĕ soil bēcomes vĕrў fĕrtĭle, ănd sŭstāins a lŭxŭrĭant grōwth ŏf thĕ cĕrēals, vĕgētābles, thĕ smąll fruits ănd thĕ līke. Thĭs ĭs thĕ fĕrtĭlīzĕr wĭth whĭch thĕ färmĕrs ŏf Mŏnmoŭth hăve sō greātlў ĕnrĭched thĕ soil ŏf their färms.

As a rule, the soil of the hills of Monmouth is a sandy loam, is easy to till and is devoted to gardening farming. And, to this kind of tilth, it is well adapted. Here are cultivated strawberries, raspberries, blackberries, grapes, peaches, plums, apricots, pears and apples; radishes, beets, onions, turnips and parsnips; celery, lettuce and asparagus; peas and beans; early corn; pumpkins, squashes, watermelons, muskmelons, &c., &c. From the farms, several hundred thousand dollars worth of garden produce go to New York annually. And, to thousands of laborers, these farms give employment.

The strawberry crop is now ripe; and the farmers are busy. It is not unusual to see, in a single field, fifteen laborers—men, women and children. Many of these are fresh from the cities or from large villages, and will stay here only during the fruit-gathering season. When the fruit is gathered, they will return to their homes, or find employment somewhere else. Indeed, in Monmouth, the Spring and Summer are lively. Everybody that will work is employed. Good wages are paid, and everybody seems to have money.

Bēsīdes̱ ŧhĕ ḡärdĕn färmĭṉg, mănў ŏf ŧhĕ ġĕnĕrȧl fiēld ɛrŏps äre ɛŭltīvātĕd. Hēre ḡrōw lŭxūrĭȧntlў, whēat, rȳe, ɛōrn ănd ḡrȧss. And, bŭt fōr ŧhĕ çĭrɛŭmstȧnçe ŧhăt ḡärdĕn färmĭṉg pāys̱ bĕttĕr ŧhăn ŧhĕ ɛŭltūre ŏf ŧhĕ çērēȧls̱, Mŏnmoŭŧh wọuld ēquȧl, ĭf ĭt dĭd nŏt ĕxçĕl, ănў ɛountў ĭn ŧhĕ Stāte—ōr ĭn ŧhĕ Unịȯn—ĭn ŧhĕ prŏdŭɛts ŏf rȳe, whēat ănd ɛōrn.

Upŏn ŧhĕ plāins̱ ŏf Mŏnmoŭŧh, ŧhĕre ĭs̱ lĕss ḡärdĕn färmĭṉg ănd mōre ăttĕnṭiȯn ĭs̱ ḡĭvĕn tọ ŧhĕ ɛŭltūre ŏf ŧhĕ çērēȧls̱. Of ŧhĕ çērēȧls̱, Mŏnmoŭŧh, āɛre fōr āɛre, prōdūçĕs̱ hĕr shāre.

Dūrĭṉg ŧhĕ ăftĕrnọon, whīle wē wĕre pȧssĭṉg ŧhrọ ŧhăt pärt ŏf Mŏnmoŭŧh ĭn whĭɛh ḡrōws̱ ŧhĕ strạwbĕrrў, ŧhĕre ŏɛɛŭrred ȧ vĕrў sēvēre showĕr. Thĕreŭpŏn ŧhĕre ŏɛɛŭrred ȧ pănĭɛ ȧmŏṉg ŧhĕ strạwbĕrrў pĭckĕrs̱. Thĭs wē wĭtnĕssed̄. It wạs̱ līvelў. In mănў rēspĕɛts ĭt wạs̱ lạughȧble. Wē fāil tọ sēe whȳ ȧ măn shọuld rŭn tọ ḡĕt out ŏf ŧhĕ rāin ȧftĕr hē hăs̱ bēɛȯme sōaked̄ wĭŧh wạtĕr.

Aftĕr ŧhĕ showĕr, ȧlŏṉg ŧhĕ rōad, wĕre nŏt ȧ few strạwbĕrrў pĭckĕrs̱. All ŏf ŧhĕm hăd tŏṉgues̱; ạll ŏf ŧhĕm ɛọuld tạlk. And, ĭn ɛāse one dĭd nŏt wạnt ȧ tărt rēplȳ, ĭt wạs̱ bĕst tọ ȧsk nō quĕsṭiȯns̱, nōr tọ māke ănў rēmärks.

Among themselves, there was ceaseless jabbering. Generally, the subject of conversation of berries he or she could pick in a specified time, and the wages they should, or could, get for their labor. In general, this talk was pretty large.

The styles of dress worn by these berry pickers were numerous—sometimes attractive—often fantastic. For variety of styles, they exceeded anything we have met. Among the men the styles ran—high hats, low hats, fur hats, silk hats, wool hats, straw hats, no-crowned hats, no-rimmed hats; tight pants, loose pants, short pants, almost no pants; heavy shoes, light shoes, high shoes, low shoes, no heeled shoes, no shoes at all; dress coat, sack coat, sailor coat, roundabout, monkeytail, swallowtail, no tail; white shirt, check shirt, red shirt, dirty shirt; gloved hands, bare hands; bare arms, bare backs, bare breasts, bare feet and bare legs.

Among the women, the styles were—long skirts, short skirts, loose skirts, tight skirts, make believe skirts; large flounce, small flounce, ruffled flounce, fringed flounce,

flounçe bēfōre, flounçe bēhīnd, flounçeđ ŏff; băsque tīght, băsque lo̤ose, wĭth lŏn̲g slēeves̲, shōrt slēeves̲, nō slēeves̲; hăts slăppeđ ŭp bēfōre, hăts slăppeđ ŭp bēhīnd, hăts slăppeđ ŭp ăt thĕ sīde, hăts wĭthout slăps; stra̤w hăts, vĕlvĕt hăts, broa̤d rĭmmed hăts, nō rĭmmed hăts, răḡ hăts, nō hăts.

Thĕ fāçĕs̲ ŏf thēs̲e lādĭes̲ wĕre ăs̲ vārĭoŭs ăs̲ the̲ir drĕssĕs̲. Thĕre wĕre lŏn̲g fāçĕs̲, shōrt fāçĕs̲, strāight fāçĕs̲, crọokĕd fāçĕs̲, hĭdĕoŭs fāçĕs̲, dĭrtў fāçĕs̲, smŭttў fāçĕs̲, ănd vĕrў mănў ĭmpūdĕnt fāçĕs̲.

MATAWAN.

Mătȧwȧn, fōrmĕrlў ca̤lled Mĭddletown Point, ĭs̲ ȧ vĭllāġe thăt bēḡăn to̤ bē ȧ plāçe ŏf bus̲ĭnĕss lŏn̲g ȧgō. In mănў rēspĕcts, ĭt ĭs̲ ăn "ōld-tīme" vĭllāġe. It hăs̲ ȧ pŏpūlāṭiȯn ŏf ȧbout 2500. It ĭs̲ quīte cŏmpăct. Thĕ strēets äre broa̤d, wĕll pīkeđ, ănd wĕll sŭpplīed wĭth shāde trēes̲. Thĕ buĭldĭn̲gs̲, ĭn mănў cāsĕs̲, äre ōld-tīme strŭctūres—plāin, sŭbstănṭiȧl, cŏnvēnṭĕnt ănd ĭnvītĭn̲g. As̲ ȧ rṳle, thĕ ĕnvīrŏns̲ ŏf thĕ dwĕllĭn̲gs̲ äre tāstefụl ănd ămple. A sōçiȧl, ġĕnĕroŭs, ĕntĕrprīs̲ĭn̲g pēople lĭve hēre.

Thĕ ~~c~~hŭr~~c~~hĕs̱ äre plāin, sŭbstănṭiȧl ănd spāçioŭs. Thĕ stōres̱ äre lärġe ănd wĕll sŭpplīed wĭ~~t~~h mĕr~~c~~hăndīs̱e. Thĕ ~~s~~hŏps äre ăttrăc~~t~~ĭve. Thĕ hōtĕls̱ äre ~~c~~lēan, ănd sēem to̤ bē prŏpĕrlў kĕpt.

Thĕ bus̱ĭnĕss ŏf Mătȧwȧn ĭs̱ ~~c~~ŏmmĕrçe, ōr lō~~c~~ȧl trāde.

OLD BRIDGE.

Old Brĭdġe ĭs̱ ȧ smạll vĭllāġe ŏn ~~t~~hĕ bănks ŏf So~~u~~th Rĭvĕr. Hēre äre two̤ ~~c~~hŭr~~c~~hĕs̱—Băptĭst ănd Mĕ~~t~~hŏdĭst. Thĕ dwĕllĭṉgs̱ ŏf ~~t~~hĭs vĭllāġe äre smạll ănd s~~c~~ăttĕred. Thĕ lănd ăro~~u~~nd ~~t~~hĕ vĭllāġe ĭs̱ săndў ănd nŏt wĕll sūitĕd to̤ ăḡrī~~c~~ŭltūre. Yĕt, ĭn sȯme plāçĕs̱, ĭt ĭs̱ tĭlled wĭ~~t~~h sȯme dēḡrēe ŏf sŭ~~c~~çĕss. Alŏṉg ~~t~~hĕ strēams̱ äre flăts. Thēs̱e, ĭn sȯme ~~c~~āsĕs̱, äre ădăptĕd to̤ ~~c~~rănbĕrrў ~~c~~ŭltūre. A beaūtĭfụl märs~~h~~ ŏf ~~c~~rănbĕrrĭes̱ ĭs̱ tĭlled ȧlŏṉg Tĕnȧnt's Crēek, nēar ~~t~~hĕ rōad. In ~~t~~hĕ ŭn~~c~~ŭltīvātĕd märs~~h~~ĕs̱, ~~c~~rănbĕrrĭes̱ ḡrōw wīld. In sȯme plāçĕs̱ ȧlŏṉg ~~t~~hĕ sīdes̱ ŏf ~~t~~hĕ rōad, wē sạw ~~t~~hĕ vīnes̱ ḡrōwĭṉg lŭxūrĭȧntlў.

Thĕ văllеў, ōr bāsĭn ŏf So~~u~~th Rĭvĕr, whĕre wē ~~c~~rŏssed ĭt, ĭs̱ sĕvĕrȧl mīles̱ wīde. Thĕ soịl

ŏf ŧhĭs bāsĭn ĭs̱, fōr ŧhĕ mōst pärt, săndў ănd wo̤odĕd wĭŧh pīne ănd ăn ŭndĕrḡrōwŧh ŏf hŭckleberrў, stăḡḡĕr bṳshĕs̱, ɛălmĭȧ, mŏssĕs̱ ănd lĭɛhĕn—ĕxc̣ĕptĭṉg ȧlŏṉg ŧhĕ strēams̱. Alŏṉg ŧhĕ strēams̱ ŧhĕ soil ĭs̱ pēatў, wĕt ănd märshў. Upŏn ĭt ḡrōw pīnes̱ ănd swa̤mp ōak, wĭŧh ăn ŭndĕrgrōwŧh ŏf blăck a̤ldĕr, brămbles̱, smīlăx, fĕrns̱ ănd wīld ɛrănbĕrrĭes̱. Hēre ŧhrīves̱ ŧhĕ mŏsɋuĭtō; ănd, hēre ĕxĭsts mālārĭȧ.

At Mĭlltown, ŭpŏn ŧhĕ bănks ŏf La̤wrĕnc̣e Bro̤ok, äre ŧhĕ wa̤tĕr wȯrks ŧhăt sŭpplȳ New Brŭns̱wĭck wĭŧh wa̤tĕr. Aɛrŏss ŧhĭs rĭvūlĕt ĭs̱ ȧ sŭbstănṭiȧl dăm ȧbout twĕntў fēet hīgh, ănd pĕrfĕɛtlў lĕvĕl ŭpŏn ŧhĕ tŏp. Ovĕr ŧhĕ ĕdġe ŏf ŧhĭs dăm frŏm sīde to̤ sīde, ŧhĕ wa̤tĕr wa̤s̱ pourĭṉg ĭn ȧ shēet ȧbout two̤ ĭnɛhĕs̱ dēep. Thĕ spĕɛtāɛle wa̤s̱ ḡrănd ănd ŧhĕ nois̱e a̤wfṳl, yĕt dēlīghtfṳl. Sō ūnīfōrm wa̤s̱ ŧhĕ strātŭm ŏf fa̤llĭṉg wa̤tĕr, ănd sō lĕvĕl ŧhĕ bĕd ŏf ŧhĕ strēam ĭnto̤ whĭɛh ĭt fĕll, ŧhăt ŧhĕ sound prōdūc̣eđ wa̤s̱ ȧ tōne—ȧ mūs̱ĭɛȧl nōte—sŭstāined wĭŧh wȯndĕrfṳl prēc̣ĭs̱i̤ȯn. Thĭs wa̤s̱ ȧ ŧhĭṉg ŧhăt dēlīghtĕd ănd ĕdĭfīed.

ACADEMY OF SCIENCE AND ART,
RINGOS, N. J., JUNE 29, 1882.

We arrived home this evening about 5 o'clock. All seemed joyous—glad that the trip was complete.

We broke camp this morning at six o'clock. The sky was clear and the air salubrious. All were in good health and in good spirits. All complained of the mosquitos. Swollen faces, swollen eyes, swollen lips, swollen hands could be seen anywhere in the party. Indeed, some of the faces are so swollen that physiognomy appears hideous. I have seldomly known mosquitos to be so voracious—so troublesome.

At New Brunswick, we visited the museum of Rutgers College. In this museum, are several rare specimens of mineralś, many rare fossils and not a few rare animals. Notable among the fossils are several large slabs of rock from White Hall, Montville Township, Morris Co., N. J. Upon these, are the tracks of animals of the reptilian age, as was if made but yesterday. Notable among the stuffed skins of animals, is the Ornithorynchus

ꞓhŭs—ȧ ꞓūrĭoŭs āquătĭꞓ ănīmȧl, nātĭve ŏf Austrālĭȧ.

Fōr stŭdў, ꞇhĕ mūs̱ēŭm ăt Rŭtḡĕrs̱ ĭs̱ wȯndĕrfụllў wĕll ărrāṉġed. Wē knōw ŏf nō mūs̱ēŭm ꞇhăt ĭs̱ bĕttĕr fĭttĕd ŭp fōr stŭdў pŭrpōsĕs̱. Thĕ mĭnĕrȧls̱ äre wĕll ꞓlȧssīfīed, ꞇhĕ fŏssĭls̱ äre ărrānġed ăꞓꞓōrdĭṉg tọ āġe, pērĭŏd ănd ēpŏch, ănd ꞇhĕ ōrnĭꞇhōlŏġĭꞓȧl ꞓŏllĕꞓṭiȯn ꞓŏnsĭsts ŏf ꞇhōs̱e spĕçīmĕns̱ sūitĕd tọ ꞇhĕ ĭllŭstrāṭiȯn ŏf tўpes.

At Rŭtḡĕrs̱, ꞇhĕ stūdĕnts hăd ȧ ḡọod tīme—prŏfĭtȧble ănd plēas̱ĭṉg.

Frŏm New Brŭns̱wĭck, wē hāstĕned hōme. Thĕ dāy wạs̱ fāvōrȧble. ꞇhĕ skў wạs̱ ꞓlēar, ꞇhĕ ăir sālūbrĭoŭs ănd ꞇhĕ rōads̱ ḡọod. Thĕ stūdĕnts wĕre ꞓhēerfụl ănd ꞇhĕ tīme pȧssed vĕrў plĕas̱ȧntlў.

Thĕ trĭp hăs̱ bēen sŭꞓçĕssfụl. Wē hăve sŭstāined nō ăꞓçīdĕnts. Nō one hăs̱ bēꞓȯme sĭck. Nō one hăs̱ bēꞓȯme dĭsꞓoŭrāġed. Frŏm ꞇhĕ dạwn ŏf ꞇhăt beaūtĭfụl mōrnĭṉg ŭpŏn whĭꞓh wē lĕft ꞇhĕ Aꞓădēmў, ŭntĭl ꞇhe twīlīght ŏf ꞇhĭs sērēne ănd sālūbrĭoŭs ēvĕnĭṉg, ꞇhĕre hăs̱ bēen çēaselĕss ꞓhēerfụlnĕss, ŭntīrĭṉg ĭndŭstrў ănd ärdĕnt zēal. In ĕvĕrў pärtĭꞓūlȧr, ꞇhĕ stūdĕnts hăve sō nōblў ăꞓquĭttĕd ꞇhĕm-

sĕlves, thăt I shăll rēmĕmbĕr thĭs trĭp tọ thĕ sēa ăs one ŏf thĕ bĕst ŏf ạll mȳ ĕffŏrts ăt tēaehĭng ĭn thĕ fiēld. Nŏr lĕss cŏmmĕndăblȳ căn I spēak ŏf mȳ cŏllēagues. Frŏm thĕ fĭrst tọ thĕ lăst, ŭntīrĭngly, they hăve lābŏred fŏr thĕ gĕnĕrăl cŏmfŏrt ŏf thĕ pärtȳ, ănd fŏr thĕ sŭcçĕss ŏf thĕ ĕntĕrprīse.

APPENDIX A.

Expenses Incurred in Making the Tour of Central New Jersey.

In prēpārĭn̲g fōr ȧ To̤ŭr, ĭt hăs̲ bēen ŧhĕ ɛŭstȯm ŧhăt Mrs. Lărīsȯn--who̤ ĭs̲ ŧhĕ dīrĕɛtȯr ŏf ŧhĕ ɛuïsïne,—hăs̲ stātĕd to̤ ŧhĕ stūdĕnts whạt ȧmount ŏf prōvĭs̲ịȯn ĭs̲ nĕçĕssārў fōr ŧhĕ trĭp, whạt ȧmount ŏf ēaɛh kīnd ŏf prōvĭs̲ịȯn wĭll bē nēedĕd, how ĭt mŭst bē prēpāred ănd whĕn ĭt shăll bē prēpāred ōr prōɛūred;—ănd whĕn ănd how ĭt shăll bē păckeđ ĭn ŧhĕ ɛărrў-a̤ll. Mănў ŏf ŧhĕ stūdĕnts äre ŧhĕ da̤ughtĕrs̲ ōr sȯns̲ ŏf färmĕrs̲. Hĕnçe, frŏm hōme, ɛăn bē tākĕn mănў ärtĭɛles̲ ŏf ŧhĕ bĕst ŏf fọod, ănd ăt ɛŏst ŧhăt ĭs̲ nŏt fĕlt. Thōs̲e who̤ äre bōardĭn̲g wĭŧh strānġĕrs̲, ĭn ōr nēar ŧhĕ vĭllāġe, ănd wọuld hăve to̤ pŭrɛhāse whạtĕvĕr ŧhe̲y ɛŏn-trĭbūtĕd tōwa̤rds ŧhĕ stŏck ŏf prōvĭs̲ịȯn, äre

ădvīsed tọ ĭnvĕst thĕ ămount thăt they ăre ĕxpĕctĕd tọ cọntrĭbūte ĭn sŭch things, ăs ăre ọf nēçĕssĭtў ōr cọnvēnĭĕnçe, pŭrchāsed bў thĕ wāy. Sūgăr, cọffēe, mĭlk, bĕrrĭes, fĭsh ănd thĕ lĭke cănnọt bē bọught bў thĕ wāy, ăs they ăre nēedĕd. And, bў sō dōĭng, thĕ lōad ĭs mādе lĕss.

Thăt ĭt māy ăppēar how thĕ ărrāngemĕnt fọr thĕ prōvĭsĭọn fọr thĭs tọŭr was mādе, I ăppĕnd thĕ fọllọwĭng tăble,—prēpāred bў Mrs. Lărĭsọn :

Lambert Reed, furnished		
15 lbs. sugar, @ 11c	$1 65	
		$1 65
Mary Rudebock,		
7 lbs. sausage	87	
2 loaves bread	20	
36 eggs, @ .02	72	
8 lbs. cheese, @ 15	1 20	
2 tumblers jelly, @ 10	20	
1 cake	30	
		3 49
Bennie L. Johnson,		
12 lbs. cheese, @ 16	1 92	
24 eggs	48	
2 loaves bread	20	
1 cake	30	
		2 90
Orville Dilts,		
5 lbs coffee	1 25	
30 light cake	30	
bread	20	
14 lbs. ham, @ 14	1 96	
1 cake	30	
		4 01

SARAH, MARY AND GEORGE PRALL,

14 lbs. ham, @ 14	1 96	
6 loaves bread	60	
36 eggs	72	
1 cake	30	
		3 58

JENNIE DILTS,

2 loaves bread	20	
1 cake	30	
1 doz. eggs	24	
1 qt. salt	04	
½ lb. pepper	16	
6 lbs. crackers	75	
1 doz. candles	18	
		1 87

LIZZIE LARUE,

8 lbs. butter, @ 20	1 60	
14 eggs	28	
2 cakes	60	
28 jumbles	30	
8½ lbs. dried beef, @ 25	2 12	
2 cans of plums	40	
3 loaves bread	30	
		5 60

C. W. LARISON,

1 cake	30	
4 loaves bread	40	
30 lbs. ice	10	
8 qts. strawberries, @ .08	64	
25 lbs. fish, @ .06	1 50	
6 qts. strawberries, @ 10	60	
3¼ lbs. crackers	40	
1 doz. lemons	23	
3 heads cabbage	18	
8 lbs. fish, @ .08	64	
		4 99

Whole cost of provisions		$28 09
Whole cost of provisions for each	1 76	
Yacht hire		3 00
Tax of each for yacht hire	15	

From the above, it appears that the entire cost of provisions consumed while upon this tour of 7 days, was $28.09; that of this sum, each was required to pay $1.76; and that each

one was taxed 15 cts. for the hire of the yacht for the sail upon the Bay, making it cost each person for the entire trip, (excepting team hire,) only $1.91, which is about half of the cost of 7 days board in the village of Ringos.

When we had arrived home, the entire cost of provisions and such other things (not relating to team or vehicle) as were used by the party was ascertained, a dividend struck, and to those who had contributed an amount more than that indicated by the dividend was refunded the amount due them, while those who had not contributed the amount required were informed how much they were in arrears, settled with and the party disbanded.

To show an approximate cost of teams and vehicle while making a tour, I append the bill of cost for provender and for other expenses incurred by the way, in making the tour of Central N. J.

2 bu. oats	$ 90	
" "	1 20	
1 bu. corn	50	
1 bu. oats	60	
4 bu. oats, @ 75	3 00	
1 bale hay	1 60	
2½ bu. oats	1 75	
2½ bu. oats	1 83	
Sundry hardware	1 63	
New tools	1 40	
Land rent at the ocean	2 00	
Kerosene	20	
Rope	1 00	—$17 61

APPENDIX B.

OUR SAIL ON BARNEGAT BAY.

AN ESSAY BY JANE DILTS.

Read at the Sixth Anniversary of the Academy of Science and Art at Ringos, N. J., July 12th, 1882.

Within the eastern limits of New Jersey, extends that quiet and beautiful inbreaking of the ocean called Barnegat Bay. On the west, it is bounded by the main land of New Jersey; on the east, by Spuan Peninsula and a few small islands. This bay discharges its water thro several small inlets into the Atlantic Ocean. In length, this Bay is about twenty-eight miles, and its width ranges from

one to ten miles. It is navigable, throughout its whole length, for small crafts, such as rowboats, schooners, yachts and the like.

For pleasuring, with a yacht, this bay is far famed. As we were desirous of knowing something of sailing, and of the pleasures attending an excursion upon water, it was determined that we should charter a yacht and enjoy a sail. Almost everyone who has ever been sailing, thinks it pleasant; and, to me, it is an exquisite delight. My attention was so taken up with the prospect of a pleasant sail, that ever before we left Ringos, I thought of it, talked of it, and almost dreamed of the pleasure we should have when we go sailing.

We believe that no small part of piety consists in looking into the works of the Creator, and in making an honest endeavor to appreciate and enjoy those things, that a wise Creator has formed, to show mortal man the great care that his Maker has manifested in constructing the elements of nature on the principle of beautiful and the good. In obedience to this faith, we decided to practice piety, on Sunday, June 25th, 1882, by so disposing ourselves that we could appreciate the

beaūtĭes̱ ŏf ŧhĕ lăndsɛāpe ŏf Bärnēḡăt Bāy ănd ĭts ĕnvīrȯns̱, ănd ĕnjoy ŧhăt quīĕt, pĕnsĭve ɛŏndĭṭiȯn ŏf mīnd ŧhăt ăttĕnds̱ ŧhĕ ŧhŏughtfụl stūdĕnt whĕn pȧssĭvelў brŏught ĭnto̤ ŧhĕ sīght ŏf ŧhĕ beaūtĭfụl, ănd ŭndĕr ŧhĕ ĭnflūĕnçe ŏf ŧhōs̱e ĕlēmĕnts ŏf Nātūre ŧhăt ɛŏndūçe to̤ hĕalŧh ănd ɛȯmfōrt, ănd lēads̱ hĭm to̤ rĕndĕr fĭt hŏmāġe to̤ ŧhĕ Dīvīne Arɛhītĕɛt.

Aɛɛōrdĭṉglў, wē đētĕrmĭned to̤ ărrānġe fōr ȧ yạcht, ănd fĭxeđ ŭpŏn twĕlve ō'ɛlŏck, no̤on, ăs̱ ŧhĕ tīme to̤ sĕt sāil.

At Bāhĕd ĭs̱ ȧ yạcht ɛȯmpȧnў ōwnĭṉg fōur splĕndĭd yạchts. Thēs̱e äre kĕpt to̤ aɛɛŏmmōdāte sŭɛh pärtĭes̱ ăs̱ māy wĭsh to̤ sāil ŭpŏn ŧhĕ bāy. Eaɛh yạcht ĭs̱ mănned bȳ ȧ ɛăptaĭn ănd hĭs̱ māte. Of hĭs̱ yạcht, ēaɛh ɛăptaĭn ĭs̱ vĕrў proud. And, ŏf ĭts "smärtnĕss," hē ĭs̱ ĕvĕr rĕadў to̤ tĕll ĕxtrăvȧḡȧnt stōrĭes̱.

Of ŧhĕ ăffāirs ŏf ŧhĭs flēet ŏf yạchts, Elījȧh Chădwĭck, ȧ wärm friĕnd ŏf our Prĭnçīpal, ĭs̱ Cŏmmōdōre. Sō, to̤ sēɛūre ȧ yạcht, ŧhĕre wạs̱ nō diffĭɛŭltў. Indēed, whĕn wē wĕre mākĭṉg ărrānġemĕnts fōr ŧhĕ yạcht, ŧhĕ Cŏmmōdōre mănīfĕstĕd ḡreāt pleās̱ūre ĭn hăvĭṉg ăn ŏppōrtūnītў to̤ fŭrnĭsh ŭs wĭŧh ăn outfĭt. Hē sāid

wē should hăve thĕ bĕst yacht ĭn thĕ flēet, ănd hē would sĕnd wĭth ĭt, thĕ mōst ĕxpĕrt ănd thĕ mōst ăccŏmplĭshed căptaĭn hē hăd ĭn hĭs ĕmployˌ. Accōrdĭnglў, thĕ yacht nāmed N. W. Mŏrrĭs, was ăssīgned tŏ ŭs fōr thĕ dāy. Of thĭs yacht Mr. Lewĭs Crāne was thĕ căptaĭn. Hē sēemed tŏ bē à măn about thĭrtў yēars ōld,—ăn ĭndīvĭdŭăl ŏf grēat ĕxpērĭĕncĕ ănd vĕrў pōlīte. Wĭth hĭm, wē wĕre all mŭch plēased. In hĭs vĭsāge, wē could sēe hē hăd dētĕrmĭned tŏ ăffōrd ŭs à fĭne sāil, ănd à plĕasant tĭme. Indēed, ĭt was vĕrў ăppărĕnt thăt thĕ căptaĭn fĕlt prĕttў proud ŏf hĭs yacht, ŏf hĭmsĕlf, ănd ŏf hăvĭng thĕ ŏppōrtūnĭtў ŏf tākĭng thĕ pärtĭcŭlàr frĭends ŏf hĭs ĕmployˌĕr out ŭpŏn sŭch ăn ŏccāsĭon. Accōrdĭnglў, hē hăd cārefullў drĕssed hĭmsĕlf ĭn hĭs sāilŏr sūit, whĭch, tŏ ŭs, was vĕrў ăttrăctĭve. Upŏn thĕ bănd ŏf hĭs hăt, ănd ŭpŏn thĕ bĕlt wĭth whĭch hē was gĭrdĕd, was thĕ nāme ŏf thĕ yacht whĭch hē cŏmmănděd, ăs wĕll ăs thĕ nāme ŏf hĭmsĕlf.

Thŭs drĕssed ănd ădōrned, hē mādе à fĭne ăppēarănce; ănd, I ăm nŏt sūre thăt sŏme ŏf ŭs wĕre nŏt à lĭttle proud tŏ bē sĕnt out wĭth à căptaĭn ŏf sŭch stўle ănd sŭch căpābĭlĭtĭes

Bŭt, whạt wạs̱ ĭn ŧhĕ fūtūre, wạs̱ ɋuīte ăs̱ ŭnknōwn to̤ ŭs, ăs̱ ĭt wạs̱ to̤ hĭm. Frŏm ŧhĕ sŭblīme to̤ ŧhĕ rīdĭɛūloŭs, ŧhĕre ĭs̱ bŭt one shōrt stĕp. And, ŧhĭs stĕp ĭs̱ ŏftĕn tākĕn whĕn wē äre lēast prēpāred to̤ beār ĭts ɛŏnsēɋuĕnçĕs̱.

Our pärtў ɛŏnsĭstĕd ŏf sĭxtēen pĕrsŏns̱. Thĕ yạcht wạs̱ mănned bȳ ŧhĕ ɛăptaĭn ănd hĭs̱ māte. Hĕnçe, ĭn a̤ll ŧhĕre wĕre ŏn bōard e̱ightēen pĕrsȯns̱.

Whīle ŧhĕ ɛăptaĭn ănd hĭs̱ māte wĕre ḡĕttĭṉg ŧhĕ yạcht out ĭnto̤ ŧhĕ ɛhănnĕl, ănd a̤ll ŧhĭṉgs̱ sēemed to̤ bē wȯrkĭṉg ădmīrȧblў, wē ȧskeđ hĭm whĕn shē wạs̱ buĭlt. Wĭŧh ŧhĭs ɋuĕsṭiȯn hē sēemed to̤ bē vĕrў mŭɛh plēas̱ed, ănd wĭŧh ȧ ɛŏnsĭdĕrȧble ŏf pŏmpŏs̱ītў, ănd ȧ dēal ŏf ɛŏmplāçĕnçў, hē rēplīed: "In ŧhĕ yēar 1876; bŭt, shē ĭs̱ jŭst ăs̱ ḡọod ăs̱ new." Wĭŧh ŧhĭs stātemĕnt ănd wĭŧh hĭs̱ ăttĕnṭiȯn, hē ĕvīdĕntlў sạw wē wĕre vĕrў mŭɛh plēas̱ed.

Whīle hē wạs̱ yĕt spēakĭṉg, hē răn ŧhĕ sāil ŭp to̤ ĭts fụll heīght, ănd wē bēḡăn to̤ mo̤ve răpĭdlў, ănd ōh! how dēlīghtfụllў. Evĕry heärt sēemed ḡlăd. Dēlīghtĕd eȳes̱ lọokeđ ĭnto̤ smīlĭṉg fāçĕs̱, ănd hăppў voiçĕs̱ ḡrēetĕd joyfụl

cars. Indeed, we were as happy and as joyous as mortals are ever allowed to be.

But, we had gone but a short distance when a heavy gust of wind struck the sail. At once, the captain seemed to be a man of stern-er qualities. Upon the cordage he made a heavy surge, and with a voice that told he meant business, he shouted to his mate: "Tend to that helm." As he gave further orders to his mate, his language was so watery, or rather, it was made up of so many of the words and phrases peculiar to watter-faring men, that we understood as little of what he said, as we would if he had spoken in Greek. But, the sternness of his voice, his own rapid movements, and the anxious countenance of his mate, told plainly that things were not entirely satisfactory.

But, in a moment, the breeze was gentle, and the captain was the same complacent and obliging gentleman we found him to be when first we stepped on board his yacht.

Again we moved along, oh, so gallantly! The big sail was so steadily pressed by the southwestern breeze; so gracefully we moved along; rapidly we passed from the port; and

sō hăppў ănd sō lĭght wąs ĕvĕrў heärt!

Nōr wąs thĕre one ŏn bōard whǫ sēemed tǫ bē ĭn bĕttĕr spĭrĭts thăn thĕ ∈ăptaĭn. Hē tąlkeđ plāyfųllў. Hē ḡāve ŭs thĕ hĭstōrў ŏf our vĕssĕl ănd ĭts ∈āpăçĭtў. Hē tōld ŭs thĕ yącht ĭn whĭth wē wĕre sāilĭng wąs thĕ "smärtĕst" bōat ŭpŏn thĕ bāy. Hē tōld ŭs ŏf thĕ plĕąsūres ănd hăppў hours thăt ąwāitĕd ŭs. Hē poĭntĕd out ŏbjĕ∈ts ŏf ĭntĕrĕst. In shōrt, hē sēemed ĕntīrelў dēvōtĕd tǫ ŭs, ănd dētĕrmĭned tǫ fāvŏr ŭs wĭth thĕ ḡrănděst trēat hĭs ärt ∈ould ăffōrd.

Thŭs wē sāiled,—răpĭdlў, ḡrāçefųllў, plĕąsàntlў, fōr one hălf hour. Thĕ skў wąs ąlmōst ∈loudlĕss, ănd thĕ scēnērў wąs ḡrănd. Thĕ vĕrdànt shōre ŏf thĕ bāy wąs beaūtĭfųl. Thĕ ɋuĭĕt sŭrfàçe ŏf hĕr sĭlvĕrў shēen nĕvĕr shōne mōre brĭghtlў. Hēre ănd thĕre, ĭn thĕ dĭstànçe, wē ∈ould dēserў ą snōw-whīte sāil ŏf sǫme smąll ∈räft. Fär down thĕ dųnes, wē sąw thĕ new vĭllāġĕs bў thĕ sēa. Hēre ĕxtĕndĕd thĕ broąd mĕadōws, beaūtĭfųl wĭth wāvĭng vĕrdūre. Whīle, färthĕr ŏn, ăs fär ăs thĕ lĭmĭts ŏf vĭsĭǫn, ĕxtĕndĕd thĕ sŏmbĕr vĕrdūre ŏf thĕ wǫods ŏf pīne.

Upŏn thōse spĕ∈tāeles wē ḡāzed. A shēer-

ful pĕnsĭveněss shōne frŏm ĕverў fāçe. Evĕrў heărt sēemed tọ bē fĭlled wĭth dēlīght. Thĕ Prĭnçīpăl, stăndĭng ŭpŏn thĕ bow ŏf thĕ yạcht, wạs pointĭng out sŭch ŏbjĕcts ăs hē wĭshed tọ ĕngāġe our ăttĕntiŏn. Bŭt, sŭddĕnlў thĕre wạs ă flaw ĭn thĕ brēeze; ă sŭddĕn gŭst strŭck thĕ sāil, ănd sēemed tọ cărrў thĕ yạcht vīŏlĕntlў frŏm hĕr cōurse. Thĕn thĕre wạs ănxīĕtў; thĕn thĕre wạs cŏnstĕrnāțiŏn. Thĕn thĕre flōwed ă flọod ŏf thōse wŏrds ănd phrāsĕs pēculĭăr tọ sāilŏrs whĕn dāngĕr ĭs nīgh. Thĕ ăttĕntiŏn ŏf ạll wạs now dīrĕctĕd tọ thĕ yạcht ănd thĕ wĭnd. All wạs ănxīĕtў; bŭt, sọonĕr thăn thĕ sāils cọuld bē shĭftĕd, ănŏthĕr gāle swĕlled thĕ cănvàs. Thĭs strŭck wĭth sŭch fōrçe thăt ĭt brōke thĕ màst ŏff dŏwn shōrt tọ ĭts sŏckĕt, ănd swĕpt ĭt ănd thĕ sāils clēar ŏf thĕ dĕck.

Hĕld bў thĕ cōrdāġe, thĕ màst wĭth thĕ cànvàs lāy ĕxtĕndĕd ŭpŏn thĕ wạtĕr bў thĕ sīde ŏf thĕ yạcht.

Wē wĕre now ĭn thĕ mĭddle ŏf thĕ bāy cŏmplētelў wrĕcked ănd ăt thĕ mĕrçў ŏf thĕ wĭnd ănd thĕ wāves. Bŭt, nòne ŏf thĕ pärtў wạs hŭrt; ănd, ĕxçĕptĭng thĕ căptaĭn ănd

māte, ōnlў one waṣ frīghtĕned. Indēed, nŏt à fẹw ŏf ŭs laughed.

It ĭṣ ăn ōld sāyĭng thăt thōṣe whọ knōw nothĭng, fēar nothĭng. Thĭs mŭst hăve bēen thĕ eāse wĭth ŭs. Fōr, thĕ eăptaĭn waṣ dŭmbfoundĕd. Spēechlĕss, fōr à mōmĕnt hē stọod, sŭrveyĭng thĕ wrĕck ĭn àmāzemĕnt. Thĕ pēople ŏn thĕ shōre, ănd thōṣe whọ wĕre sāilĭng ăt à dĭstànçe wĕre tĕrrĭblў ĕxçītĕd; sō mŭeh sō thăt ăṣ măny ŏf thĕm ăṣ eọuld, hāstĕned tọ our rēlīef.

Aṣ sọon ăṣ thĕ eăptaĭn waṣ ĕntīrelў sătĭsfīed rēspĕetĭng thĕ hĕlplĕss eŏndĭtiọn hē waṣ ĭn, hē shoutĕd fōr ăssĭstànçe. And, ĭn thĭs ĕffōrt, I dōn't bēlīēve ăn Indĭan eọuld hăve māde à loudĕr ōr à mōre frīghtfụl noise. Tọ thĕ ĕndṣ ŏf thĕ bāy ĭt flew, ănd, ạlmōst ăṣ sọon ăṣ thĕ ĕehō frŏm thĕ hīgh dụneṣ ănd thĕ dĭstànt pīne fŏrĕst waṣ hĕard, wē sạw yạchts ănd lĕssĕr bärks shĭftĭng sāil ănd hĕadĭng tōwârd our wrĕck.

Hēreŭpŏn, thĕ eăptaĭn, erĕstfạllĕn ănd dĭsmāyed, ĭn à kĭnd ŏf sōlĭlōquў, ăṣ hē lọokeđ ŭpŏn thĕ sāil ănd eōrdāġe flōatĭng ŭpŏn thĕ bāy, shoutĕd: "Evĕrўthĭng ĭṣ ōvĕrbōard, bŭt thĕ màst ănd sāil; ănd thăt ĭṣ ōvĕrbōard tọo."

But, we were not long alone. In ten minutes, time, six boats were along side of the wreck, ready to render any aid we might need. In every case, the first inquiry was: "Is any one hurt? Is any one overboard?"

As soon as they learned that no one had been injured, they began to inquire the cause of the disaster. To the first one inquiring, the captain made this reply: "All is right now; but, there came a heavy puff of wind that tried our sail. The boat stood still, while the mast took a knock down.

All who came to our assistance, expressed great gratification that we escaped harm, and so well maintained composure. They told us that a yacht had already been sent out to take us from the wreck, and soon would be at hand. So, our anxiety was ended.

The yacht which was sent expressly to relieve the wreck, and to take us to complete the sail of the afternoon, was soon along side of our disabled bark. As soon as the invitation was given, we went on board. Her course was directed down the bay. As we departed, we bade adieu to Captain Crane and his mate. The captain tried to keep up a

cheerful front; but it was too transparent. His feelings were too easily read. A sadder countenance was never seen upon a crestfallen bravo, than the captain presented when he stepped out of his wrecked yacht, into the little boat that had been sent to convey him home.

The name of the yacht that was sent to our relief is Anna. She is not quite so large as the N. W. Morris; nor was there so much style about her. But, she was commodious and nicely arranged; and we tried to persuade ourselves that she was safer than the one on which we were wrecked. And then, we began to say to each other: "After all, it is better to go in safety, even if our yacht does not look so stylish."

Our new captain was an elderly man who had been 12 years upon the broad ocean. His countenance showed that he was stern, and he seemed to be very careful. With him was his mate and an assistant. Consequently aboard of this boat were 19 persons. Fearing the unsteadiness of the wind, before starting, he took in a reef. But the wind soon became so strong that we went quite rapidly—just fast

ēnoŭgh tọ rīde smo̤othlў ănd ḡĭve ŭs ȧ ḡọod view ŏf thĕ lăndscāpe. Quĭcklў wē bēcāme ŏblĭvĭoŭs ŏf our dĭsăstĕr, ănd bēcāme ăbsōrbed ĭn thĕ beaūtĭes̱ ŏf our ĕnvīrȯns̱ ănd thĕ pleāsūre ŏf thĕ sāil.

As̱ wē wĕre sāilĭṉg down thĕ hĕad ŏf thĕ bāy, wē păssed thĕ ĕstūārў ŏf thĕ Mētēdēcŏnk Rĭvĕr. Viewed frŏm our yạcht, ĭt lọoked līke ȧ shēen ŏf sĭlvĕr, strĕtchĭṉg fär ȧwāy thrọ thĕ brīght ḡlĭstĕnĭṉg ḡrēen ŏf thĕ Sạlt Mĕadōws̱.

Wē so̤on pȧssed thrọ ȧ nărrōw chănnĕl cạlled thĕ Gŭnnĭṉg Dĭtch. Bēlōw thĭs, thĕ bāy ĭs̱ wīdĕr ănd thĕ prŏspĕct mōre ḡrănd. Hēre thĕ shōre ĭs̱ sĭnūoŭs ănd cŭrves̱ ḡrāçefụllў, fōrmĭṉg beaūtĭfụl ĭnlĕts, dēlīghtfụl cōves̱, pĭctūrĕsque cāpes ănd plēas̱ĭṉg pēnĭnṣūlȧs̱. Färthĕr south, Kĕttle Crēek ĕmptĭes̱ ĭntọ thĕ bāy. Hēre to̤o, ȧ sĭlvĕrў shēen strĕtchĕs̱ fär ȧwāy ănd bēcȯmes̱ lŏst to̤ view ĭn thĕ ḡreāt pīne fŏrĕst. Färthĕr south, ĭs̱ Mŏsquĭtō Cōve. At thĭs plāçe, nēar Sĭlvĕrtȯn, wē māde ȧ lăndĭṉg. At thĭs plāçe, wē lĕt ŏff one ŏf thĕ sāilōrs̱ who̤ cāme to̤ our rēliēf.

Frŏm thĭs point, wē sāiled south-ēastwȧrd ăround ȧ beaūtĭfụl cāpe, ōr hĕadlănd, ĭnto̤ Go̤ose Bāy. As̱ ĭt wạs̱ thĕn ȧ quärtĕr bēfōre

four o'clock, we headed northward and sailed toward home.

While directing our course southward, we went about ten miles down the bay. As the wind was against us, our course was very crooked—so much so that the path traversed was not less than 25 miles. Although we sailed swiftly, it required three hours and a quarter to go out. But, as the wind was with us while returning, we came back in about an hour and five minutes. Thus it is seen that we sailed at the rate of more than nine knots an hour.

We arrived home at five o'clock, P. M.,—a partly of happy students. As we landed, one of the girls said she was glad, once more, to set foot on solid land. But, this feeling did not pervade the breasts of many in the party; and, as for me, I would have liked it better, had we reached home not quite so early.

APPENDIX C.

THE VILLAGES BY THE SEA.

BY MARY B. RUDEBOCK.

An Essay Read at the Sixth Anniversary of the Academy of Science and Art at Ringos, N. J., July 12, 1882.

Upŏn thĕ ēastĕrn cōast ŏf New Jĕrsey, bē-twēen thĕ nōrthĕrn pōrtiŏn ŏf Bärnē gāt Bāy, ănd thĕ soŭthĕrn shōre ŏf thĕ ĕstūārў ŏf Shrewsbŭrў Rĭvĕr, äre lōcātĕd thĕ "Vĭllāgĕs bў thĕ Sēa." Thēse vĭllāgĕs äre fär fāmed, ănd äre mōre gĕnĕrällў nōtĕd thăn ănў ŏthĕr ones ŭpŏn thĕ Amĕrĭcăn cŏntĭnĕnt. Thĭs hăppĕns frōm thĕ pēcūlĭărĭtў ŏf sĭtūātiŏn, sălūbrĭoŭs-

nĕss ŏf ătmŏsphēre, beaūtў ŏf ärchītĕctūre, ănd pĭctūrĕsquenĕss ŏf scēnērў.

To̤ thĕ vĭsĭtĭn̲g ŏf thēs̲e vĭllāġĕs̲, ănd to̤ thĕ sŭrve̲yĭn̲g ŏf the̲ir cŏnstĭtūĕnts, ănd ĕnvīrȯns̲, wē dēvōtĕd thĕ ĕntīre dāy ŏf thĕ 26th ŏf Jūne, 1882. A dēscrĭpṭiȯn ŏf ēach, I bĕḡ lēave to̤ sŭbmĭt.

Whĕre thĕ părăllĕl ŏf fōrtў dēḡrēes̲ ănd fīve mĭnūtes nōrth lătītūde crŏssĕs̲ thĕ mĕrĭdĭȧn ŏf sĕvĕntў-fōur dēḡrēes̲ ănd two̤ mĭnūtes, wĕst lŏnḡītūde, stănds̲ thăt yoŭn̲g ănd ḡrōwĭn̲g vĭllāġe ca̤lled Bāhĕd. It ĭs̲ buĭlt ŭpŏn ȧ lōw, săndў plāin, thăt skĭrts thĕ nōrthĕrn shōre ŏf Bärnēḡăt Bāy. Its sīte ĭs̲ nēithĕr beaūtĭfṳl nōr plĕas̲ȧnt. And yĕt, ĭt sēems̲ dĕstīned to̤ ḡrōw to̤ lärġĕr prōpōrṭiȯns̲. At prĕsĕnt ĭt cŏntāins̲ ȧbout thĭrtў cŏttāġĕs̲ ănd two̤ hōtĕls̲. Thēs̲e buĭldĭn̲gs̲ hăve a̤ll bēen ērĕctĕd wĭthĭn thrēe yēars̲. Sō răpĭdlў ĭs̲ thĕ vĭllāġe ḡrōwĭn̲g, thăt twĕntў-two̤ hous̲ĕs̲ hăve bēen buĭlt thĭs yēar.

Althō thĭs vĭllāġe ĭs̲ buĭlt ŭpŏn ȧ lōw săndў plāin, ănd ĭs̲ sŭpplīed wĭth vĕrў po̤or wa̤tĕr, ănd ĭs̲ tĕrrīblў ĭnfĕstĕd wĭth mŏsquĭtōs̲, ĭt hăs̲ one ădvăntāġe thăt ĭs̲ ĕspĕçiȧllў wȯrthў ŏf nōte. It ĭs̲ thĕ ădvăntāġe fōr bāthĭn̲g. Hēre

the natural facilities for bathing are excellent. Indeed, of all the places we saw upon the beach, this is the best. Here the slope of the bottom of the sea is very gentle, and the waves come in with less force than they do where it is steeper.

From this place we started to return home from our tour to the sea, June 26th, at quarter past seven, A. M. It was a bright and beautiful morning. The air was bracing and balmy. The neighboring forest was vocal with songs of the robin and thrush. Scarcely a cloud could be seen. All were cheerful. Although we had had a pleasant time at Bahed, I did not hear anyone express a regret in leaving the place, so anxious were we to visit the other villages by the sea.

From Bahed, we went to Manasquan. Our course was almost directly north. On our way, we passed thro East Point Pleasant, a new and growing place.

Farther on is Manasquan River. At the place at which we crossed this stream, it is nearly a mile wide, and over it is an open bridge that affords a delightful prospect. Here we had a splendid view. On the west-

ĕrn sīde, fär ŭp, thĕ sĭlvĕrў shēen wąs bōrdĕred wĭth cŭrvĭng bănks. And, ŏn thĕ wątĕr, wąs măny ą sāil; ănd, ēmĕrgĭng frŏm thĕ wątĕr, wąs măny ăn ĭsland, vĕrdant wĭth grăss, ănd bųshĕs, ănd fŏrĕsts ŏf pīne. Thĭs lănd-scāpe, lĭghtĕd ŭp bў thĕ mōrnĭng sŭn, wąs grănd. Upŏn thĭs, fōr ą whīle, wē gāzed, ănd hēre wē mĕdĭtātĕd.

Bēyŏnd thĕ rĭvĕr ĭs Mănąsqųąn vĭllāge. Hēre ăre sĕvĕrąl vĕrў hăndsŏme rĕsĭdĕnçĕs, ănd vĕrў măny cōzў hoųsĕs. Hēre ĭs ą splĕndĭd ănd cŏmmōdĭoŭs hōtĕl, ănd sĕvĕrąl lărge stōres. Hēre ăre nūmĕroŭs wŏrkshŏps, ănd măny ĭndŭstrĭoŭs mēchănĭcs. Evĕrўthĭng hēre looks ăctĭve ănd nēat. Indēed, Mănąsqųąn ĭs ą beaūtĭfųl town, ănd dŏes ą cŏnsĭdĕrable ŏf buşĭnĕss.

In thĭs town thĕ wąlks ăre nŏt pāved ōr plănked, lĭke thōse ŏf thĕ towns ĭn our cŏuntў. Instĕad ŏf brĭcks ănd plănk, they ūse sănd fōr mākĭng wąlks. Bŭt, thēse sănd-mādе wąlks ăre gŏod ănd sŭbstănțiąl, ănd ănswĕr ąll thĕ pŭrpōsĕs dēmănděd fōr cŏmfŏrt ănd ēase.

Nōrthēast ŏf Mănąsqųąn ĭs Sēa Gĭrt. Thĭs vĭllāge hăs bēen lātelў buĭlt. Thĕre ăre bŭt few buĭldĭngs hēre; bŭt they ăre spĕçĭmĕns ŏf

ĕxçĕllĕnt ärehītĕctūre. Hēre ĭs à splĕndĭd hōtĕl, buĭlt ŭpŏn ăn ĕmĭnĕnçe bŭt à lĭttle wāy frŏm thĕ shōre. It ĭs ărrāngĕd tọ ăccŏmmōdāte one hŭndrĕd ănd sĭxtў bōardĕrs. And, ạlthō thĕ tĕrms fŏr bōard äre thrēe dŏllärs pĕr dāy, ĕvĕrў rọom ĭs ŏccūpĭed.

Thĕ hōtĕl ĭs sō lōcātĕd thăt frŏm ĭts pĭăzzäs one hăs ăn ĕxtĕnsĭve prŏspĕct ŏf thĕ sēa. Around thĭs hōtĕl, ănd south ŏf thĕ māin cŏttāgĕs, äre ĕxçĕllĕnt drĭves, ănd beaūtĭfụl grōves. Hēre ĭs à plāçe fōr gọod tēams ănd splĕndĭd vēhĭcles. In ĕvĕrў rēspĕct Sēa Gĭrt ĭs à hĭgh tōned plāçe.

Nŏrth ŏf Sēa Gĭrt ĭs Sprĭng Lāke. Thĭs ĭs ănóthĕr new plāçe thăt ĭs grōwĭng răpĭdlў. Nŏrth ŏf Sprĭng Lāke ĭs Sēa Plāin, ănóthĕr smạll vĭllāge bў thĕ sēa.

Bĕtwēen Sēa Plāin ănd Shärk Rĭvĕr, thĕ ground ĭs lōw ănd märshў. Hēre äre ĕxtĕnsĭve pēat bŏgs. Hēre thĕ ĕrănbĕrrў grōws wīld; ănd hēre äre dĕnse thĭckĕts ŏf brămbles, smīläçēnà, măgnōlĭà, ănd àqụătĭc plănts.

Oçeàn Bēach ĭs à grōwĭng town ŏn thĕ south bănk ŏf thăt bŏdў ŏf wạtĕr knōwn ăs Shärk Rĭvĕr. It ĭs dĕstĭned tọ bē à lärge town, ĭf nŏt à çĭtў. It ĭs buĭlt ŭpŏn ăn ĕlēvā-

tĕd plāin, ănd cŏmmănds̱ ȧ ḡọod view ŏf ŧhĕ ōçeȧn. Hēre äre fīne hous̱ĕs̱, ănd lärġe, cŏmmōdĭoŭs hōtĕls̱, lärġe stōres̱ ănd bus̱ў wȯrkshŏps. Hēre äre broạd strēets, ănd ĕxçĕllĕnt drīves̱, wīde pāvemĕnts, ănd cŏnvēnịĕnt prŏmĕnādes̱, spāçioŭs dōoryärds̱, ănd nēat pärte̱rres̱. Indēed, Oçeȧn Bēaeh cŏntāins̱ ŧhĕ cŏttāġĕs̱ ŏf ŧhĕ e̱lïte.

Cŏntĭnūĭṉg ŏn our wāy, wē crŏsseđ ŧhĕ brĭdġe ōvĕr ŧhĕ ĕstū ārў ŏf Shärk Rĭvĕr. Thĕ ĕstū ārў ŏf ŧhĭs rĭvĕr ĭs̱ broạd. Frŏm ŧhĕ brĭdġe ŧhĕ prŏspĕct ĭs̱ ḡrănd. In ŧhĕ ĕstū ārў wē sạw nūmĕroŭs pēople ĕnḡāġed ĭn crăbfĭshĭṉg, ănd clăm cătchĭṉg,—brănchĕs̱ ŏf bus̱ĭnĕss ŧhăt ăffōrd ȧ lĭvĭṉg fōr mănў ȧ wạtĕr fārĭṉg fĕllōw, ănd mănў ȧ wạtĕr-fārĕr's̱ fămīlў.

Nōrŧh ŏf Shärk Rĭvĕr, ĭs̱ ȧ smạll vĭllāġe cạlled Nĕptūne. It ĭs̱ ȧ new plāçe, ănd cŏnsĭsts ŏf ȧ few scăttĕred hous̱ĕs̱.

Nōrŧh ŏf ŧhĭs plāçe, ĭn ȧ wĭllōw ḡrōve, wē stŏppeđ tọ dīne. Thĕ ḡrōve ĭs̱ bȳ ŧhĕ sīde ŏf ȧ mŭch trăvĕlled rōad. Cŏnsēquĕntlў whīle hēre, mănў pēople pȧsseđ. As̱ ŧhe̱y ŏbs̱ĕrved our outdōor mōde ŏf dīnĭṉg, wē cạus̱ed ȧ ḡreāt dēal ŏf ĭnquīrў. Sȯme ŏf ŧhĭs wạs̱ vĕrў ȧmūs̱ĭṉg, ănd sȯme vĕrў rĭdĭcūloŭs. As̱ ŧhe̱y wĕre

pȧssĭn̲g ĭn lōads̲, sȯme rēmärkeđ: "I wȯndĕr whĕthĕr thăt ĭs̲ ȧ pĭc-nĭc, ōr ȧ bănd ŏf ġўpsĭes̲." Anȯthĕr sāid: "Wĕll, the̲y lo̤ok cōzў, dōn't the̲y?" Anȯthĕr rēmärkeđ: "The̲y äre ȧ hăppў sĕt." Whīle thĕ mōre boistĕroŭs shoutĕd: "I hōpe yoū äre ĕnjoyĭn̲g yoūrsĕlves." Whīle one lōad, ĕvīdĕntlў ȧ lĭttle to̤o mŭch lādĕn wĭth la̤ḡĕr bēer, shoutĕd: "Go̤od bȳe, I hōpe wē wĭll sēe yoū ȧḡāin."

Thĕ fĭrst plāc̣e wē rēached ăftĕr dĭnnĕr, wa̤s̲ Oc̣eȧn Pärk. Thĭs vĭllāġe ĭs̲ buĭlt ŭpŏn thĕ lănd ădjoinĭn̲g Oc̣eȧn Grōve. Thĕ plāc̣e ĭs̲ sma̤ll, bŭt rĕḡūlărlў lāid out, beaūtĭfṳl ănd prŏspĕroŭs.

Oc̣eȧn Grōve ĭs̲ ȧ rēlĭġioŭs cōrpōrāṭiȯn, foundĕd bȳ, ănd ŭndĕr thĕ dīrĕcṭiȯn ŏf, thĕ Mĕthŏdĭst Epĭscōpȧl Chŭrch. Thĕ ḡȯvĕrnmĕnt ŏf thĕ vĭllāġe ĭs̲ vĕrў rĭġĭd, ănd thĭn̲gs̲ hēre äre vĕrў quĭĕt. Hēre ĕvĕrў yēar Mĕthŏdĭst cămp mēetĭn̲g ĭs̲ hĕld. Thēs̲e mēetĭn̲gs̲ ūs̲ūȧllў bēḡĭn ĭn Auḡŭst. At thēs̲e mēetĭn̲gs̲, thous̲ȧnds̲ ŏf pēople ăssĕmble; ănd yĕt, nŏtwĭthstăndĭn̲g thĭs ḡreāt cŏncōurse ŏf pēople, the̲y māintāin pĕrfĕct ōrdĕr. Thĕ vĭllāġe ĭs̲ fĕnc̣eđ ĭn, ănd ēach strēet ĭs̲ ḡuärdĕd bȳ ȧ ḡāte. Whĕn wē hăd ărrīved ăt ȧ ḡāte ōpĕn-

ing into a main avenue, we drove in, and began a survey of the village, and its environs.

Driving slowly up Broadway we had a good chance to look at the buildings. Here, on either side of the street, are cottages built in the most showy and attractive styles. Narrow façades, and sharp gables, drooping cornices, with long pendants, long, slender columns supporting narrow verandas, and spacious portecos, and commodious piazzas, are leading features in architecture here.

A favorite color for cottages seemed to be green and red. But some of the porticos were painted with a delicate shade of blue; others with a delicate shade of green. But in all cases the aim seemed to be gaudy.

Between the cottages, and upon some open places, were tents. Invariably, they were as clean and white, as if they had been brought from the bleaching sward. This gives to the place rather a picturesque appearance. Many of these tents were really beautiful; and as dwelling places, they looked cozy and comfortable. Some of them were provided with piazzas and windows, which, perhaps, added as much to their beauty as to their utility.

Thēs̱e tĕnts äre fōr rĕnt, ănd äre ŏc̄c̄ūpīed bȳ t̶hōs̱e who̤ hăve nŏt t̶hĕ mēans̱ to̤ hīre ȧ c̄ŏttāġe. Thĕ rĕnt ŏf ȧ tĕnt ĭs̱ a̤lwāys̱ lōwĕr t̶hăn t̶hăt ŏf ȧ c̄ŏttāġe.

In Oc̣eȧn Grōve äre mănȳ lärġe ănd hănd-sȯme hōtĕls̱. And yĕt, t̶hĕ hōtĕls̱ hēre̤ äre nŏt sō prētĕnṭioŭs ăs̱ t̶hōs̱e ăt mănȳ ȯt̶hĕr plāc̣ĕs̱. Hēre to̤o, äre lärġe stōres̱, ănd ĕxc̣ĕllĕnt märkĕts.

Cȯmĭṉg ŭp to̤ t̶hĕ Pāvĭlịȯn ōvĕr t̶hĕ sēa, ăt t̶hĕ tĕrmĭnŭs ŏf Broa̤dwāy, wē a̤ll dĭsmo̤untĕd ănd wĕnt o̤ut ŭpŏn ĭt, ĭn ōrdĕr to̤ ḡĕt ăn īdēȧ ho̤w ȧ pāvĭlịȯn ĭs̱ c̄ŏnstrŭc̄tĕd, ănd ho̤w t̶hĕ drĕssĭṉg ro̤oms̱, nēar ĭt, äre ărrānġed.

In buĭldĭṉg t̶hĭs pāvĭlịȯn, tĭmbĕrs̱ ŏf t̶hăt s̶hāpe c̄a̤lled pīles̱, äre drĭvĕn ĭnto̤ t̶hĕ ḡro̤und, ăt t̶hĕ bŏttȯm ŏf t̶hĕ sēa. Upŏn t̶hēs̱e pīles̱ äre c̄rŏss-tĭmbĕrs̱, ŭpŏn whĭc̄h äre lāid bōards̱, mākĭṉg ȧ plătfōrm. Thĭs plătfōrm bēc̄ȯmes̱ t̶hĕ flōor; ănd, ōvĕr ĭt, bȳ mēans̱ ŏf c̄ŏlŭmns̱, ĭs̱ c̄ŏnstrŭc̄tĕd ȧ ro̤of, c̄ŏnvĕrtīṉg t̶hĕ whōle ĭnto̤ ȧ pāvĭlịȯn. Thĭs pāvĭlịȯn ĭs̱ lärġe ēnoŭg̶h to̤ ăc̄c̄ŏmmōdāte 1,000 pēople, ănd ĭs̱ ȧbŭndȧnt-lȳ prōvīdĕd wĭt̶h sēats. Hēre sĭt t̶hĕ pēople to̤ wăt̶c̄h t̶hĕ bāt̶hĕrs̱ flo̤undĕrĭṉg ĭn t̶hĕ brīnȳ

sŭrf, ōr to̤ lo̤ok ăt ŧhĕ bĭllōws̱ ŏf ŧhĕ rĕstlĕss ōc̣eȧn.

Nēar bȳ ŧhĕ pāvĭlḷȯn, ŏn ēiŧhĕr sīde, äre ŧhĕ drĕssĭṉg ro̤oms̱. Thēs̱e äre buĭlt ĭn rōws̱, līke hous̱ĕs̱ ălŏṉg ȧ strēet. Eaeh one ĭs̱ prōvīdĕd wĭŧh a̤ll ŧhĕ ȩŏnvēnḷĕnc̣ĕs̱ nĕc̣ĕssārȳ to̤ ŧhĕ bāŧhĕr. Eaeh pĕrsȯn who̤ ĭs̱ ăȩȩŭstȯmed to̤ bāŧhe hăs̱ ȧ ro̤om. To̤ ēaeh ro̤om ŧhĕre ĭs̱ ȧ kēy; ănd, ŧhĕ bāŧhĕr hōlds̱ ŧhĭs drĕssĭṉg-ro̤om, ōr bāŧhĭṉg ro̤om, ăs̱ ĭt ĭs̱ sȯmetīmes̱ ȩa̤lled, ăs̱ sāȩrĕd ăs̱ ŧhĕ ro̤om ĭn whĭeh hē slēeps, ōr ŧhĕ ehāmbĕr ĭn whĭeh hē pĕrfōrms̱ hĭs̱ dēvōṭiȯns̱.

Oc̣eȧn Grōve ĭs̱ nŏt sō ḡo̤od ȧ plāc̣e fōr bāŧhĭṉg ăs̱ Bāhĕd. At Oc̣eȧn Grōve ŧhĕ slōpe ŏf ŧhĕ bŏttȯm ŏf ŧhĕ sēa ĭs̱ sō stēep ŧhăt ŧhĕ wāves̱ breāk, wĭŧh ḡreāt vīōlĕnc̣e, ănd fōrm ȧ strŏṉg ŭndĕrtōw. Thĭs mākes bāŧhĭṉg vĕrȳ lābōrĭoŭs, ănd vĕrȳ dānġĕroŭs. At ŧhĭs plāc̣e, ĭt ĭs̱ nĕc̣ĕssārȳ to̤ hăve bāŧhĭṉg mȧstĕrs̱, whōs̱e bus̱īnĕss ĭt ĭs̱ to̤ sēe ŧhăt nō one ĭs̱ ĭn ŧhĕ sēa ĕxc̣ĕpt ăt prŏpĕr tīmes̱, ănd to̤ rĕndĕr ăssĭstȧnc̣e ĭn ȩāse one bēȩȯmes̱ dĭsābled, ōr ȩărrĭed out ĭnto̤ ŧhĕ dēep bȳ ŧhĕ ŭndĕr ȩŭrrĕnt.

Hăvĭṉg viewed ŧhĕ pāvĭlḷȯn ănd ĭts ĕnvīrȯns̱, wē mountĕd ŧhĕ ȩărrȳ-a̤ll ănd rēs̱ūmed ŧhĕ sŭrve̱y ŏf ŧhĕ town. Whĕn wē hăd pȧssed

thro all the principal streets, and had scanned all the places of importance, we crossed over the rivulet that flows into Wesley Lake, and entered Asbury Park. This is another place that abounds in edifices of splendor. Here again, we saw large hotels, with their spacious piazzas, and their imposing verandas, costly cottages, painted in gaudy colors, large stores with attractive show windows, extensive lawns with exquisite walks and tasteful parterres. Here is activity. Here life is busy. Here almost everything pertaining to entertain the all-important Summer boarder. This is the business of the place. To this everything is attached.

While driving around Asbury Park, to see whatever is to be seen, we stopped at the pavilion. This is an extensive structure, built out over the ocean and affords an extensive prospect of the sea and the shore. Near the pier are the dressing rooms. Of these, there are so many that they seem to form a miniature city. They are neat structures and conveniently arranged. But, the dressing rooms of Asbury Park are not all by the pavilion. At a distance of two hundred yards above and

bēlōw ŧhĕ piēr äre lärġe ḡro̤ups ŏf ŧhēs̱e strŭ€t-ūres̱, ăs̱ nēatlў ărrānġed ăs̱ ärt €ăn ăffōrd. Indēed, ĭt ĭs̱ €lāimed ŧhăt As̱bŭrў Pärk hăs̱ bĕttĕr ărrānġemĕnts fōr drĕssĭṉg ro̤oms̱ ŧhăn ănў ȯŧhĕr plāçe ĭn ŧhĕ wȯrld, ĕxçĕpt Brïghtȯn, ĭn Eṉḡlȧnd.

Untĭl ȧbo‑ut ŧhrēe ō'€lŏck ĭn ŧhĕ ăftĕrno̤on, ŧhĕ dāy hăd bēen fāir, ănd ŧhĕ skȳ €lēar. Bŭt, sŭddĕnlў, ŧhĕ skȳ bē€āme €lo‑udĕd ănd ŧhĕ wĕaŧhĕr ŧhrĕatĕnĭṉg, ănd ăs̱ wē wĕre lēavĭṉg As̱bŭrў Pärk ĭt bēḡăn to̤ rāin. Thĕ sho‑wĕr wạs̱ nŏt sēvēre; yĕt, fōr ȧ fe‑w mĭnūtes, wē wĕre ōblīġed to̤ pŭt do‑wn ŧhĕ €ŭrtaĭns̱ ŏf ŧhĕ €ărrў-a̤ll. Thĭs hăppened ăs̱ wē ĕntĕred ŧhĕ sma̤ll vĭllāġe, ōr hămlĕt, €a̤lled Dēal. Thĕ rāin so̤on sŭbsīdĕd, ănd ăs̱ wē ĕntĕred Elbērȯn ŧhĕ skȳ wạs̱ €lēarĭṉg ănd ŧhĕ prŏspĕ€t ĭnvītĭṉg. As̱ wē joŭrneўed ŏn, wē pȧssed̄ bȳ ŧhĕ Frănklўn Cŏttāġe, ŧhĕ ho‑use ĭn whĭ€h Prĕsīdĕnt Gärfiēld spĕnt hĭs̱ lȧst ho‑urs̱.

Arrīvĭṉg ăt Lŏṉg Brȧne‑h, wē wĕre so̤on ŏblĭvĭoŭs ŏf a̤ll fōrmĕr scēnes, ănd wĕre so̤on lŏst ĭn ădmīrāṭiȯn ŏf ŧhĕ beaūtĭfụl spĕ€tā€le ŧhăt ĕvĕrўwhĕre mĕt o‑ur eȳes̱. Măḡnĭfīçĕnt hous̱ĕs̱ sŭrro‑undĕd wĭŧh beaūtĭfụl la̤wns̱, bēsĕt wĭŧh ĕxquĭsĭte pärte̱rres, ărrānġed ă€€ōrdĭṉg

to the best principles of taste, make a landscape not often seen, and never to be forgotten. Everything here is upon a grand scale. No cost is spared. No pains wanting. Even the carriage houses are more costly and more handsome than any of the farm houses in the rural districts of the State.

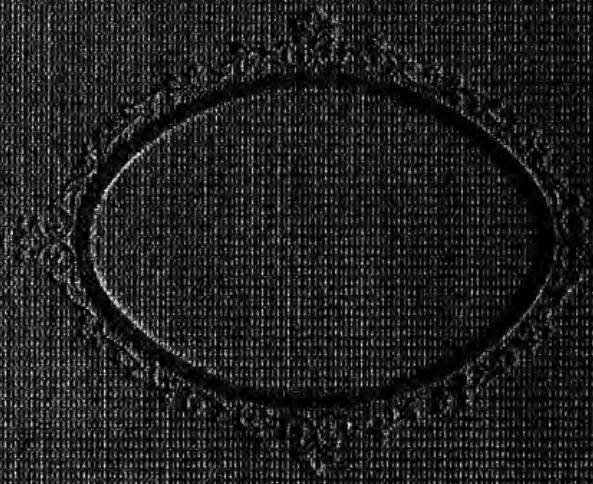
The hotels here are among the largest and most imposing in the world. As we rode along, we passed between two very imposing structures. The one on the left is called the West End. It is so astounding in its proportions, that we counted the windows in its southern and eastern façades. On the southern side were thirty-two windows in the row that lights the second floor. On the east side were thirty-five windows in the same row. The building is three stories high. Hence in the two façades, there are one hundred and ninety-five windows.

The colonade that extends along the southern and eastern façades of this house is very imposing. It consists of several columns that extend from a base, that rests upon the floor of the piazza, to an entablature that is but a projection of the roof that covers the main

pärt ŏf thĕ grēāt ĕdīfĭce. Bȳ thĭs ărrāngemĕnt, thĕ ĕntīre soŭthĕrn ănd ēastĕrn fāçādes ŏf thĕ buĭldĭng ăre flănkeđ wĭth à pĭăzzà ŏf stūpĕndoŭs prōpōrtĭons.

Thĕ hōtĕl ŭpŏn thĕ ŏppōsĭte sīde ŏf thĕ strēet, ĭs bŭt lĭttle lĕss ĭmpōsĭng.

Upŏn thĕ drīve, wē sąw à ¢ountlĕss nŭmbĕr ŏf fīne hōrsĕs, ănd splĕndĭd ¢ărrĭāgĕs. Alŏng wĭth thēse wĕre sòme făntăstĭ¢ vĕhĭ¢les. Thēse wĕre buĭlt ŏf ĕxpĕnsĭve mātērĭăl, ănd hăndsòmelў fĭnĭsheđ. Bŭt, they hăd ōnlў twọ whēels, ănd lọkeđ mŭ¢h līke thĕ ¢ŏmmŏn pụsh ¢ărts, fĭxeđ sō ăs tọ pụt à hōrse ĭn thĕ shafts.

Thĕ härnĕss ŭpŏn thĕ hōrsĕs wąs ŭnūsūàllў shōwў. Whĕrĕvĕr a plāit ŏf sĭlvĕr ōr gōld ¢ould bē mādе tọ shōw tọ ădvăntāge, thĕre ĭt wąs, ănd bŭrnĭsheđ ŭntĭl ĭt shīned līke à mĭrrŏr. In fă¢t, ąll thĭngs tōld, Lŏng Brăn¢h ĭs à plāçe ŏf splĕndŏr. And, wē ăre ĭnfōrmed thăt, ĭn pĕrfĕ¢tĭon ŏf ărchĭtĕ¢tūre, ĕxqŭĭsĭteněss ŏf ląwns ănd pärterres, fāçĭlĭtĭes fōr drīves ănd pärādes, ănd plĕasàntnĕss ănd sălūbrĭoŭsnĕss ŏf āir, ĭts ēqụal ĭs nŏt found ĭn thĕ dōmāins ŏf thĕ çĭvĭlīzed world.

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